### PETER BORROWS

Bundle of documents provided by Seqwater regarding systems in place for communication during flood events, revision of flood mitigation manuals and production of flood event reports

**Tender Copy** 

Vol 1 of 2

QFCI	<b>,</b> , ,	
	Date:	
Exhibit	t Number: // <i>30</i>	

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Our ref: Doc 1845562

7 February 2012

Mr Peter Borrows
Chief Executive Officer, Seqwater
GPO Box 16146
CITY EAST QLD 4002

#### REQUIREMENT TO PROVIDE INFORMATION TO COMMISSION OF INQUIRY

I, Justice Catherine E Holmes, Commissioner of Inquiry, require Mr Peter Borrows to provide the following information, documents, records and other things to the Queensland Floods Commission of Inquiry pursuant to section 5 of the *Commissions of Inquiry Act 1950* (Qld):

#### Documents evidencing:

- 1. the systems and procedures relevant to:
  - a. the provision of information to the chief executive officer and the board about the management of Wivenhoe and Somerset dams during the flood events that occurred in the 2010/2011 wet season
  - b. the review of the flood mitigation manual for Wivenhoe and Somerset dams and its submission to the Department of Environment and Resource Management for approval under the *Water Supply (Safety and Reliability) Act 2008* (Qld), which resulted in Revision 7 of the Manual
  - the creation of flood event reports following flood events at Wivenhoe and Somerset dams that occurred in the 2010/2011 wet season
- 2. how those systems and procedures were developed, including:
  - a. external advice obtained
  - b. who approved them before implementation
  - what role, if any, the chief executive officer and the board played in that development
- 3. how those systems are tested and reviewed, including:
  - a. how often testing is completed
  - b. who completes the tests

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- c. any external or internal review or audit of those systems or procedures or tests of them
- 4. any breaches of those systems and procedures identified by Seqwater
- 5. any weaknesses identified in those systems and procedures, and any action taken by Seqwater to address those weaknesses
- 6. a list of risk management frameworks adopted by Seqwater (for example, an Australian Standard) relevant to topics 1(a) to (c).

Material is to be provided to the Queensland Floods Commission of Inquiry by 12 pm, Wednesday 8 February 2012.

Material required can be provided by post, email or by arranging delivery to the Commission by emailing info@floodcommission.gld.gov.au.

Commissioner

Justice C E Holmes

& Wolmes



8 February 2012

Justice Catherine E Holmes Commissioner of Inquiry Queensland Floods Commission of Inquiry

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By Hand

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Dear Justice Holmes

### Segwater

### Requirement to Provide Information to Peter Borrows dated 7 February 2012

We refer to the Commission's requirement to provide information dated 7 February 2012 issued to Peter Borrows (*Requirement*) which required the provision of documents evidencing:

- 1. the systems and procedures relevant to:
  - (a) the provision of information to the chief executive officer and the board about the management of Wivenhoe and Somerset dams during the flood events that occurred in the 2010/2011 wet season;
  - (b) the review of the flood mitigation manual for Wivenhoe and Somerset dams and its submission to the Department of Environment and Resource Management for approval under the Water Supply (Safety and Reliability) Act 2008 (Qld), which resulted in Revision 7 of the Manual;
  - (c) the creation of the flood event reports following flood events at Wivenhoe and Somerset dams that occurred in 2010/2011 wet season;
- how those systems and procedures were developed, including:
  - (a) external advice obtained;
  - (b) who approved them before implementation;
  - (c) what role, if any, the chief executive officer and the board played in that development;
- 3. how those systems are tested and reviewed, including:

Bangkok Beljing IP Brisbane Hanoi Ho Chi Minh City Hong Kong Jakarta Melbourne Perth Port Moresby Shanghai Singapore Sydney

Our Ref MGI:120128021

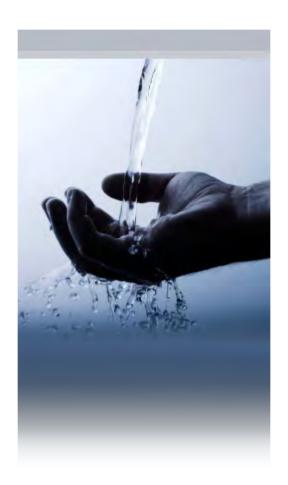
- (a) how often testing is completed;
- (b) who completes the tests;
- (c) any external or internal review or audit of those systems or procedures or tests of them:
- 4. any breaches of those systems and procedures identified by Seqwater;
- 5. any weaknesses identified in those systems and procedures, and any action taken by Seqwater to address those weaknesses;
- a list of risk management frameworks adopted by Seqwater (for example, an Australian Standard) relevant to topics 1(a) to 1(c).

We **enclose** a USB stick containing documents relevant to the above categories, identified in the limited time available. Any additional documents identified will be forwarded to the Commission by way of supplement.



Encl.

### Incident & Emergency Response Plan



Initial Issue 10 July 2009 Version 5 25 October 2010





### Is it a Risk?

### If in doubt,

### **Sing Out**



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#### **Table of Contents**

Abbre	viations, Definitions and Terms	4
Docun	nent Control	6
SEQ W	/ater Entities Emergency Framework	7
Object	tives and Key Concepts	9
Scope	and Related Plans	10
Key As	spects of the Grid ERP	14
	fy and Assess Incident	22
	cations	35
	ish Command and Control	40
4 Mana	ge the Emergency	46
<b>5</b> Mana <sub>l</sub>	ge the Recovery	55
6	vement Actions	го
•	lists	
	Attachment A: Related Plans	
	Attachment B: SEQ Water Grid Emergency Response Action Checklist	66
	Attachment C: Emergency Management Team structure	68
	Attachment D: Incident Response Process	69
	Attachment E: Chlorine and monochloramine level exemptions	70
	Attachment F: SEQ Key Internal Contacts	72
	Attachment G: Incident Close-out Report	73
	Attachment H: Emergency External Contact List –	74
	Attachment I: Grid Participant Emergency Response Plan approval requirements	83



### **Abbreviations, Definitions and Terms**

Abbi eviations, De	ennitions and Terms
AIIMS	Australian Inter-service Incident Management System (AIIMS)
Allconnex Water	Allconnex Water is the water and wastewater business for the Gold Coast, Logan and Redland districts.
Command	Is the responsibility for directing personnel and resources of a participant in the performance of its role and tasks.
Control	Is the overall direction of response activities in an incident situation.
Coordination	Is the bringing together of elements to ensure effective response to emergencies
Critical infrastructure	Infrastructure which, if destroyed, degraded or rendered unavailable for an extended period, will impact water supply to our customers.
DERM	Queensland Department of Environment and Resource Management
EGM	Seqwater Executive General Manager
Emergency	A situation or occurrence that happens as a consequence of an incident and demands immediate action. For the purposes of this Plan, an 'emergency' is an incident that impacts on water quality, water supply reliability and/or public reassurance, and has an overall severity rating of Level 3, 4 or 5 under the severity classification approach outlined in this Plan.
Emergency Management	The emergency response function largely involving strategic command and external communications.
Emergency Operating Instructions	Emergency Operating Instructions issued by the Water Grid Manager.
Emergency Response Plan (ERP)	A plan prepared by the Water Grid Manager or by a Grid Participant such as Seqwater in accordance with the Market Rules
Grid Customer	A Grid Customer of the Water Grid Manager as defined in Schedule 4 of the <i>Water Act</i> 2000.
Grid Instructions	Instructions given to Grid and Distribution Service Providers in accordance with the Market Rules.
Grid Manager	South East Queensland Water Grid Manager
Grid Participant	An entity that is referred to in section 2.3 of the Market Rules.
Grid Service Provider	Has the meaning given in Schedule 4 of the <i>Water Act 2000</i> and includes a Bulk Supplier, Bulk Transporter and Manufactured Water Provider
GSPERP	Grid Service Provider Emergency Response Plan (GSPERP)
НАССР	Hazard Analysis Critical Control Points
IERP	Incident and Emergency Response Plan

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 4 of 3
Document Owner: D. Roberts Document Approver: D. Roberts



Incident

Any occurrence that has resulted in, or has the potential to result in (i.e., a near miss) adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these and classified against a gradient from 1 to 5. Ongoing

conditions that have the potential to result in adverse consequences and non-compliances

with legal and regulatory requirements are also considered to be incidents.

Interagency Operations Team

An expert reference panel assembled by the Water Grid Manager when required to provide technical, operational and risk assessment advice and recommendations on any aspect of managing a given emergency.

LinkWater

The Queensland Bulk Water Transport Authority, trading as LinkWater

**Market Rules** 

The Market Rules: SEQ Water Market.

**OWSR** 

Office of the Water Supply Regulator

The Water Supply (Safety and Reliability) Act 2008 includes new provisions regulating drinking water quality to protect public health. Drinking water quality management plans must be approved by the Office of the Water Supply Regulator and will be subject to ongoing

reviews and regular audits

QWC

**Queensland Water Commission** 

**Public Health** 

A department of Queensland Health responsible for Population health services of the Division target the entire population (or sub-populations), rather than providing personalised treatment and care services for individuals and small groups.

Queensland Urban Utilities

Queensland Urban Utilities delivers water and wastewater services to customers in Brisbane, Ipswich, Lockyer Valley Scenic Rim and Somerset.

Risk

The chance of something happening that will have an impact on objectives. It is measured in terms of the consequences of an event and their likelihood. (AS/NZS 31000:2009 'Risk

management')

SEQ

**WGM** 

South East Queensland

**Unity Water** 

Unity Water provides water supply and sewerage services to Moreton Bay and Sunshine Coast residential and business customers.

WaterSecure

WaterSecure is the Queensland Government authority responsible for producing sources of water for South East Queensland through the Gold Coast Desalination Plant and Western

A Water Supply Emergency Declaration made in accordance with section 25B of the Water

Corridor Recycled Water Scheme.

Water Supply

Act 2000.

**Emergency Declaration** 

South East Queensland Water Grid Manager

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 5 of 3

Document Owner: D. Roberts Document Approver: D. Roberts



### **Document Control**

#### Revision

Version Number	Date	Author	Revision Description / Remarks
1	10/07/2009	P.Rawlings	Amendments made resulting from Grid Manager remedy notices and recommendations
2	31/07/2009	P.Rawlings	Amendment made resulting from review of IERP and the inclusion of the Alert phase
3	17/12/2009	P. Rawlings	Amended to align with the requirements of the Grid ERP
4	12/04/2010	T. Carter	Amended checklists now in Q-Pulse as forms.
5	25/10/2010	D. Roberts	Alignment with Grid ERP Version 2.0

### **Document Approval**

Version Number	Date	Remarks	Signature of CEO	Approved Date
5	25/10/2010	Submission for approval		25 / 10 /2010

#### Related Documents

Seqwater's Incident and Emergency Response Plan, described throughout the document as the IERP, was written to be consistent with version 2.0 of the SEQ Water Grid Emergency Response Plan signed by the Hon. Stephen Robertson, Minister for Natural Resources, Mines and Energy and Minister for Trade on 24/9/2010. The SEQ Water Grid Emergency Response Plan will be referred to throughout this IERP as the Grid ERP.

### Amendments and Approvals

Seqwater's IERP is a controlled document and is retained in and maintained via the corporate document management system currently using Q-Pulse as the repository for documents. In accordance with the SEQ Water Market Rules this plan shall be reviewed annually. All amendments arising from the annual review shall be communciated to relevant staff across the organisation.

The Principal Coordinator Incident and Emergency Management is responsible for the review and update of this IERP. No amendment to this plan shall be undertaken by anyone without the approval of that position.

The Chief Executive Officer is responsible for approval of this document.

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 6 of 3

Document Owner: D. Roberts Document Approver: D. Roberts



### Distribution of the plan

The controlled copy of this plan is maintained by the Principal Coordinator, Incident and Emergency Management and retained within the corporate management system Q-Pulse. Any hard copies that are distributed will be uncontrolled when printed.

Copies of the Grid ERP have been issued electronically by the Grid Manager and the currency of stored documents can be verified from the Grid Manager or the following website: <a href="http://www.qwc.qld.gov.au/">http://www.qwc.qld.gov.au/</a>

### Acknowledgements

This plan has been developed and formulated with the help and input from a number of individuals across Seqwater. The Executive Leadership Team specifically acknowledges those individuals who have contributed to the development, formulation, review and improvement of the plan. In addition, the plan has also been formulated by reviewing and including relevant material from other organisations' emergency and incident management documentation. Those organisations include:

<u>Organisation</u> <u>Document / Reference</u>

SEQ Water Grid Manager SEQ Water Grid ERP

Queensland Urban Utilities Emergency Management Plan

Melbourne Water General Emergency Management System

Sydney Water Emergency Response Plan
Sydney Water Incident Controllers Guide
Gold Coast City Council (Gold Coast Water) Emergency Response Plan

Emergency Management Australia Undertake Emergency Planning Module PUA EMR 010 A

### **SEQ Water Entities Emergency Framework**

#### Industry Structure

A South East Queensland Water Market (the **SEQ Water Market**) has been established under which various entities supply and transport water to three distribution entities that are responsible for supplying water to customers in South East Queensland.

The Queensland Water Commission (QWC) is the Rules Administrator for the SEQ Water Market Rules. The Market Rules are one of a suite of instruments designed to regulate various aspects of the Market. The South East Queensland Water (Restructuring) Act 2007 (the Restructuring Act) established various new water entities, which participate in the SEQ Water Market. The State owned entities are:

- Queensland Bulk Water Supply Authority (Seqwater)
- Queensland Manufactured Water Authority (WaterSecure)
- Queensland Bulk Water Transport Authority (LinkWater)
- South East Queensland Water Grid Manager (Grid Manager)

The Local Government owned Distribution Retail entities are:

- Allconnex Water
- Queensland Urban Utilities



#### Unity Water

### Statutory Obligations

The Market Rules (SEQ Water Market) require each entity to prepare an ERP that is consistent with the Grid ERP developed and administered by the Grid Manager. Although these obligations are limited to the development of an ERP, the inextricable link between incidents and emergencies are well documented in this plan and its formal title reflects this broader scope.

The preparation and implementation of this IERP for Seqwater's operations will assist in ensuring that the Grid ERP priorities are met, which includes:

- 1. Water Quality
- 2. Water Supply Reliability
- Public Reassurance

### Incident or Emergency

It is important to note that the Grid ERP is designed to deal with those occurrences which affect more than one Grid Participant or those with potential to become whole-of-grid emergencies.

The aim is to ensure that affected entities are made aware of the implications to them and that the response is managed in a coordinated water industry approach. Seqwater's IERP details the management processes which we follow to manage, respond to, and recover from, incidents and emergencies within our own organisation as well as linking with other Grid Participants as required.

Both the Grid ERP and Seqwater IERP classify incidents in emergencies in an escalating scale from 1 to 5 with an alert level between level 2 and level 3. Incidents classified as Level 1 or 2 are smaller events that typically do not have, or are not likely to have, serious consequences, or widespread or cross-grid impacts. These incidents can be effectively managed within the capabilities of Seqwater and therefore do not need to be reported to the Grid Manager.

The Grid ERP is structured so that Alerts and level 3 incidents, or those that may cause more widespread concern, are afforded the same procedural requirements as the emergency level 4 and 5 incidents which will have broader impacts. As an incident classified in Level, 3, 4, or 5 may result in major emergency or even catastrophic situations, the management is governed by provisions in the Grid ERP.

For clarity, the roles and responsibilities of the "Emergency Manager" is a function of the Grid Manager, whilst the roles and responsibilities of the "Incident Manager" is a function of Seqwater regardless of the incident level.

In the circumstance of an incident, Seqwater is required to respond as the Incident Manager by dealing with the technical aspects of its business, liaising with other Grid Participants at an operational level and if required notify the Grid Manager. Should the occurrence be classified as a level 3 or greater it is likely to have an impact on other Grid Participants, the Grid Manager will therefore coordinate the response with each entity managing their own component of the incident.



### **Objectives and Key Concepts**

### Objectives- Incident & Emergency Response Plan

The aim of this IERP is to

- Build on existing Seqwater incident response processes to allow a collective and uniform approach to emergency response
- Fulfil Segwater's obligation under the Market Rules to prepare an ERP for its water supply works
- Ensure alignment between the Seqwater process and the requirements of the Grid Manager to ensure that there is the greatest possible consistency between both processes
- Ensure Seqwater has the capability and processes to effectively respond to incidents and emergencies
- Provide a high level of confidence to our customers and stakeholders
- Be an active participant in the SE Queensland Water Grid by interacting with Grid Participants
- To clearly detail the processes that Seqwater will engage in order to effectively respond to and manage events that have the potential for adverse impacts upon the following key business areas:
- Customer & Stakeholders
- Water Quality (Public Safety)
- The Environment
- Our Reputation
- Governance (decision making)

- Our People (OH&S)
- Water Supply (Production Targets)
- Our Assets
- Security (Physical and Natural Events)

#### Key Concepts -Incident and Emergency Management

The key concepts that underpin Seqwater's Incident and Emergency Management arrangements are:

- Safety (Staff & Community)
- Immediate and effective response
- Effective communications with Seqwater's Executive Leadership Team and key stakeholders
- Consider the full context and business environment
- Delivery of speedy and honest information to the Grid Manager and to affected Grid Participants
- Maintain business continuity
- Learn and Improve organisational capacity

All Seqwater personnel are to ensure that the following priorities are focused upon when responding to incidents:

- Protection of people
- · Protection of the environment
- Customer & stakeholders needs and expectations
- Maintenance of suitable water quality and supply.
- Reduction of trauma
- Protection of assets
- Our reputation



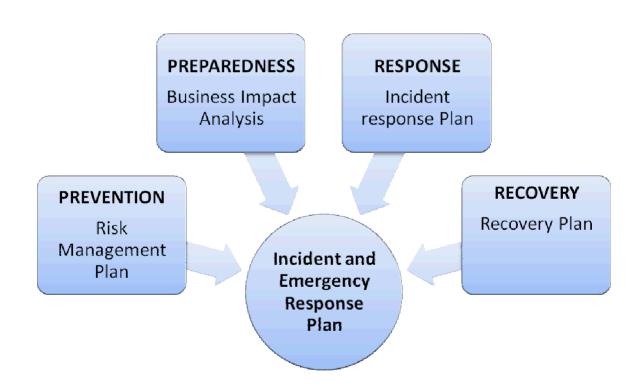
### **Scope and Related Plans**

### Linkages to Business Continuity Framework

Apart from a Statutory responsibility under the Market Rules to develop an IERP, Seqwater is also required to undertake business continuity planning (BCP) to ensure the entity can function during crises caused from a range of adverse circumstances. Our processes need to ensure the risks of these events are assessed and process are established, trained and implemented, and we establish a culture of learning and review. Part of this BCP processes is the development of an IERP to ensure our 'response' is functional and effective in the context of the incident. The diagram below demonstrates the link between BCP and IERP.

**Figure 1 Business Continuity Planning Process** 

### **Business Continuity Planning Process**



Document Number: ERP-00001 Version Date: 25/10/2010 Page: 10 of 3
Document Owner: D. Roberts Document Approver: D. Roberts



#### Prevention

Segwater actively promotes business activities to prevent or minimise the effects of incidents and emergencies. These include compliance with relevant legislation, development and implementation, assessment of risk management strategies and processes, ongoing staff training and assessment activities associated with risk management, HACCP, Emergency Action Plans and Emergency Preparedness and Response procedures.

#### **Preparedness**

Segwater actively promotes on an ongoing basis, the development and implementation of emergency plans and processes that detail the measures to be deployed. Seqwater also liaises with other Water Grid entities, emergency services and the community to ensure awareness of potential risks and emergency preparedness are known and what measures are in place to effectively respond to them. In addition, Emergency Action Plans and site-specific Emergency, Preparedness, and Response procedures detail steps to be taken to respond to a number of emergency scenarios. Segwater also schedules and undertakes scenario-based exercises to ensure there is a high level of understanding by those within the organisation who may be called upon to respond. Segwater will ensure that there are adequate internal resources to effectively deal with incidents and emergencies as they arise.

#### Response

Segwater's IERP initiates an occurrence-driven response with the first internal-to-Segwater requirement being a declaration of an Incident. Immediately following the declaration a range of related support elements will be activated and put in place together with any necessary communication measures. These measures may include consultations, warnings, and emergency instructions to the response team and other identified stakeholders. Seqwater will ensure that there are adequate resources allocated to incident and emergencies as they are declared to ensure impacts are minimised.

#### Recovery

**Document Owner:** 

The 'recovery' element focuses on the eventual resumption of normal operations and an investigation into what occurred to contribute to continuous improvement. It is important to note that the emergency and recovery phases are not mutually exclusive and that a degree of overlap between emergency and recovery procedures are, at times, inevitable.



### All Hazards Approach

This IERP has been designed to include an "All Hazards Approach" and underpins a number of other implemented measures such as Dam Emergency Action Plans developed to assist in the management of incidents and emergencies. Other related plans are listed in Attachment A.

 The Figure below details the array of emergency plans and Hazard Analysis and Critical Control Points (HACCP) measures currently in place.
 Figure 2



### SEQ Water Grid Emergency Response Plan - Documents and Procedures

This document is consistent with and meets the objectives of the Grid ERP. As a means to ensure consistency and a measure of compliance, a detailed summary of content that is specified by the Grid ERP to be part of the Seqwater IERP has been provided in attachment I.

The Grid ERP has been developed to manage incidents and emergencies in six steps. These steps are outlined below.

- 1. Identify and assess incident severity
- 2. Notify
- 3. Establish command and control
- 4. Manage the emergency
- 5. Manage the recovery
- 6. Improvement actions



Each of these sections details step by step information on the "Who", "What" and When" for each stage of the emergency response and a checklist of actions under each of these steps is provided in attachment B.

Seqwater has aligned the phases of its IERP with the Grid ERP's six steps as described above. These phases have been adopted to ensure incidents, whether operational or otherwise are effectively responded to and appropriately reviewed.

### Segwater's responsibilities under the Grid ERP

Under the Grid ERP, Seqwater has the following general responsibilities:

- Development of an ERP that is consistent with the Grid ERP and the market rules
- Management of incidents and emergencies in accordance with the Grid ERP and Seqwater's IERP and other emergency arrangements in place
- Appropriate communication of incidents, including
  - the relevant emergency authorities, where applicable
  - the Grid Manager
  - the relevant regulators
  - responsible Ministers or Chief Executive Officers (if applicable)
  - other affected Grid Participants
- Work cooperatively with the Grid Manager's Emergency Coordination Team and any appointed Emergency Manager
- Utilise the Emergency Response IT Solution when implemented for all Emergency Response related activities.

### Grid Manager's Role

The Grid Manager at an incident 'Alert' level or above shall:

- conduct emergency coordination
  - liaise with the Incident Management Team established by Seqwater or another grid participant
  - undertake modelling for the Water Grid and issue new Grid Instructions, if required
  - provide mutual assistance as agreed between the Grid Manager and other Grid Participants such as
     Seqwater
- conduct emergency management—unless another Emergency Manager is put in place
  - coordinate the combined Emergency Management Team
  - be the coordination point (conduit) for communications about the incident
  - facilitate debriefings of incidents at level 3 or above as part of the recovery and close-out process.



### **Key Aspects of the Grid ERP**

Seqwater's 6 steps to incident and emergency management are articulated in the next chapter, however key to understanding the linkages between the Grid ERP and Seqwater's IERP is the following discussion around incidents and emergencies and emergency management including coordination, command and control and the responsibilities for teams formed during an emergency.

### Incident Levels and Definitions

The Grid ERP has adopted five levels of severity together with an Alert level between levels 2 and 3. These levels range from local impacts on a single facility and the incident managed using standard operating procedures and communication protocols (Level 1), to those where state or federal government intervention would be expected (Level 5). Definitions and general principles relating to these levels are detailed in Table 8.

An incident identified as Levels 1 and 2, or Alert (internal to Seqwater) are smaller-scale events that do not typically have the broader impacts on other Grid Participants. Therefore are not subject to the Grid ERP. The exception to this rule is when there is already an emergency response for a higher level incident being managed as per the protocols contained in Grid ERP. This requires the Level 1, 2 or Alert incidents to be managed as part of the higher emergency response.

An Alert that escalates, or has the potential to escalate, can be expected to have broader impacts and may result in associated emergency situations, and therefore their management is subject to the Grid ERP. Whilst Alerts to the Grid Manager are not defined as an emergency, they do have the same notification requirements as Level 3, 4 and 5 incidents. Further discussion on Alerts adopted by Seqwater and those issued to the Grid Manager are provided on page 22.

Incidents which are classified as level 3 or greater fall under the command and control of the Grid Manager.

The following table succinctly demonstrates the distinction between incidents and emergencies. Table 1: Incident vs emergency

	Incident	Emergency
Definition	Any occurrence that has resulted in, or has the potential to result in adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these	A situation or occurrence that happens as a consequence of an incident and demands immediate action
General nature	Physical event	Broader whole-of-Grid and public interface outcomes – may be physical and/or intangible
Location	Site-based	Not usually location-based
Management focus	Operational – physical rectification	Corporate/supporting services – e.g. coordinating whole-of- Grid assistance, stakeholder management, communications, etc.
Relevant severity levels	■ 1, 2 ■ Alert ■ 3 ■ 4, 5	■3 ■4,5



Under the Grid ERP, Seqwater is clearly responsible for carrying out incident management in accordance with our IERPs and Operating Protocols.

The following text outlines the change in command and control structures under the Grid ERP.

#### **Emergency** coordination

The co-ordination of Level 3 and above will generally be undertaken by the Emergency Manager who employs a range of coordination activities to facilitate the total emergency response and to ensure whole-of-Grid operations to maintain supply. This role is distinct from managing the incident at the entity or asset level.

These coordination activities include:

- liaison between Grid Participants and other interested agencies
- facilitating resource sharing among Grid Participants
- seeking and sharing additional expert advice
- assisting the Emergency Manager, when this function has been transferred to another agency (i.e. Qld Health)
- coordinating and preparing key communications (both internal and external)
- issuing Grid Instructions and Emergency Operating Instructions, as necessary.

The Grid Manager is responsible for establishing the Technical and Communications Coordination Teams as soon as incidents are declared at level 3 or greater however much of the technical information will come from the grid entities.

Table 2 below, highlights the key responsibilities of each of the 4 key functions for Command and Control of an Emergency.

Table 2: Command and control function responsibilities

Function	Description	Key responsibilities
Incident management	Managing the physical incident onsite	<ul> <li>Actions undertaken to manage the incident under Seqwater's IERP, including both the operational response and the supporting staff functions, including legal, insurance, human resources, security, Grid Participant operability and liabilities etc.</li> </ul>



Function	Description	Key responsibilities
Technical coordination	Coordinating whole-of-Grid operations and support	<ul> <li>Assist the Emergency Manager</li> <li>Facilitate interagency liaison</li> <li>Facilitate resource sharing and mutual assistance among Grid Participants from an operations perspective</li> <li>Seek and share additional expert advice</li> <li>Remodel the water security position</li> <li>Issue Grid Instructions and Emergency Operating Instructions, as necessary</li> <li>Facilitate close-out debrief</li> <li>Prepare Technical Operations Strategy for Emergency Management Team approval</li> </ul>
Communications coordination	Coordinating Water Grid internal and external communications	<ul> <li>Assist the Emergency Manager</li> <li>Internal stakeholder management</li> <li>Facilitate interagency liaison</li> <li>Prepare all internal and external communications materials as required</li> <li>Issue all internal communications</li> <li>Facilitate resource sharing and mutual assistance among Grid Participants from a communications perspective</li> <li>Seek and share additional expert advice</li> <li>Prepare Communications Strategy for Emergency Management Team approval</li> </ul>
Emergency management	Strategic command and key stakeholder management	<ul> <li>Strategically manage response to the emergency</li> <li>Determine risk management strategy</li> <li>Coordinate investigations</li> <li>Single contact point (Emergency Manager) for the emergency unless this is delegated to other Emergency Response Team member/s</li> <li>Key stakeholder management</li> <li>Approve all external communications:</li> <li>Briefings</li> <li>Media releases</li> <li>Public interface</li> <li>Approve Technical Operations and Communications Strategies</li> <li>Issue all external communications</li> </ul>

### Command and Control Function Ownership

Under many foreseeable circumstances, the Grid Manager will undertake the emergency management function. However, in some circumstances emergency management may be assumed by another agency



with statutory responsibility (e.g. Queensland Health). In this case, the Grid Manager's task is to coordinate the SEQ water industry response – including technical advice and communications.

When an external agency such as Queensland Health takes the emergency management role, the Grid Manager will continue to act as the lead representative for the Water Grid. Seqwater via its incident management arrangements shall ensure close liaison with the Grid Manager and provide any required support and information.

Table 3 below details the circumstances in which each entity may take ownership of the Incident Management, Emergency Management and Emergency Coordination functions.

Table3: Team membership by function

Function	Owner	Circumstances
Incident management	Seqwater	Always.
Emergency coordination	Grid Manager	Always.
Emergency management	Grid Manager	Most emergencies—'default' Emergency Manager.  The Grid Manager will combine the emergency management and emergency coordination functions unless another agency with an overriding interest assumes the emergency management function.
	Office of the Water Supply Regulator	May assume the emergency management function for emergencies involving water quality.
		The Grid Manager will contact the Office of the Water Supply Regulator in the event of a relevant emergency to establish who will take the emergency management role.
	Queensland Health	Will assume the emergency management function for major drinking water health-related emergencies, as the organisation best able to manage public health risk.
		The Grid Manager will contact Queensland Health in the event of a relevant emergency to establish who will take the emergency management role.
	Premier's Department	May assume the emergency management function for level 4 and 5 emergencies that are particularly severe incidents or have attracted a particularly high level of public interest.
		The Premier's Department will be briefed on the emergency via the Department of Environment and Resource Management, and will advise the Grid Manager if it decides to take the emergency management role.
	Emergency Services/ State Disaster Management Group	May assume the emergency management function for level 4 and 5 emergencies that require a very large-scale response or which fall under the Queensland Disaster Management System (e.g. terrorism, natural disasters).
		The Grid Manager will contact Emergency Services in the event of a relevant emergency to establish who will take the emergency management role.



As the Emergency Manager, the Grid Manager will determine the composition of the Emergency Management Team. For level 3 incidents, the Emergency Management Team will consist, as a minimum, a designated Emergency Manager from within the Grid Manager's team.

#### Functional team membership

In general terms, the functional teams will be made up as follows:

**Table 4: Function teams membership** 

Function	Agency	Team	Team leader	Team members
Incident management	Seqwater	Incident Management Team	Incident Manager	As appointed
Technical coordination	Grid Manager	Technical Coordination Team	Deputy Emergency Manager - Operations	Grid Manager staff     Seqwater and other Grid Participant's staff
Communications coordination	Grid Manager	Communications Coordination Team	Deputy Emergency Manager - Communications	Grid Manager staff     Seqwater and other Grid Participant's staff
Emergency management	Grid Manager	Emergency Management Team	Emergency Manager	Grid Manager staff     Seqwater and other Grid Participant's executive staff     Communications staff
	Queensland Health	Emergency Management Team based on Major Water Incident Management Group	State Health Incident Coordinator (Chief Health Officer)	Senior Health Officer Queensland     Health     CEOs of Water Grid entities     Premier's Department
	Emergency Services/ State Disaster Management Group	Emergency Management Team based on State Disaster Management Group	State Disaster Manager	<ul> <li>Ministerial staff</li> <li>Communications staff</li> <li>State regulators</li> <li>Specialist advisors, as needed</li> </ul>

#### Incident Management Team

The structure and composition of Seqwater's Incident Management Team will be in accordance with this IERP and will largely rely upon internal staff resources. Teams will be established as needed.

### Emergency Management Team

The structure and composition of the Emergency Management Team will vary according to the emergency situation and the entity undertaking this function. For very straightforward emergencies, the Emergency Management Team may consist of a single manager from within the Grid Manager's staff. In other cases the Emergency Management Team may consist of the Emergency Manager, a nominee from each impacted Grid Participant and the Grid Manager's staff. All decisions on the EMT composition will be made by the Emergency Manager

Before accepting any employee secondment from Seqwater to the Grid Manager's Emergency Management Team, Seqwater Executive Leadership Team must ensure that people with sufficient knowledge and authority remain to undertake management and control of the incident at the local level.



An indicative structure has been included in Attachment C for use as a default. Depending on the emergency situation, it may require some changes to effectively manage the response. The Seqwater nominee on the Emergency Management Team will be the single Seqwater point of contact during the emergency.

The Emergency Management Team will appoint a staff member from the Grid Manager as the Deputy Emergency Manager – Communications and another staff member from the Grid Manager as the Deputy Emergency Manager – Operations.

The appointment of these positions will be confirmed by the Emergency Management Team at its first meeting.

Where Queensland Health undertakes this function, the Emergency Management Team structure and composition will be in accordance with the 'Queensland Health protocol for the management of major drinking water health-related incidents'. The team will include senior representatives from the Water Grid.

Where the State Disaster Management Group undertakes this function, it will be in accordance with the State Disaster Management Plan.

### Technical Coordination Team

The structure and composition of EMT's Technical Coordination Team will be as directed by the Emergency Management Team Deputy Emergency Manager – Operations. It will rely upon staff resources from within the Grid Manager, however may also draw upon technical and operations staff of the impacted Grid Participants.

The function of the Technical Coordination Team is to coordinate and manage implementation within the water grid actions required by the Emergency Management Team.

#### Communications Coordination Team

The structure and composition of the Communications Coordination Team will be as directed by the Emergency Management Team Deputy Emergency Manager – Communications. It will also draw upon communications and media staff of the impacted Grid Participants.

The function of the Communications Coordination Team is to coordinate and manage internal and external communications – including information to the Minister and media relations.

#### Interagency Operations Team

The Emergency Management Team may also establish an Interagency Operations Team for additional specialist advice, if required.

The Interagency Operations Team is an independent expert reference panel assembled to provide technical or specialist advice and recommendations on any aspect of managing a given emergency, for example, specialist chemicals advice. It will essentially contain skills that are not readily available from within the Water Grid.

Its size and composition will be determined for each event. The Emergency Manager will designate a Grid Participant or external agency staff member to be the manager of the Interagency Operations Team.



**Table 5: Indicative Interagency Operations Team meeting requirements** 

Level	Frequency	Format
1, 2, Alert	Interagency Operations Team not required	
3	If Emergency Management Team establishes Interagency     Operations Team	Teleconference
4 and 5	Minimum once daily     Increase frequency, as required	Daily in-person meeting at combined Emergency Response Team location/incident room     Additional meetings may be by teleconference or in person as appropriate

#### Location

Unless the Emergency Manager advises otherwise, the emergency response functional teams will be located as follows:

Table 6: Normal emergency response functional team locations

Function team	Location
Incident management	As defined by the Seqwater Incident Manager with the following options:
	Primary Incident Room – 240 Margaret Street Brisbane
	Secondary Incident Room – North Pine WTP cnr Byrnes and Protheroe Road Joyner
Technical coordination	As directed by the Deputy Emergency Manager – Operations. It will be an appropriate location to achieve efficient situational awareness
Communications coordination	Grid Manager's office, Level 15, 53 Albert Street, Brisbane
Emergency management	Grid Manager's incident room, Level 15, 53 Albert Street, Brisbane
Interagency Operations Team	As directed by the Emergency Manager

### Liaison and resource sharing

The Grid Manager provides a single point of contact and clearing house for information across all interested parties in the emergency response. This simplifies liaison processes, prevents confusion and ensures information ends up where it is needed.

Typical examples of this liaison undertaken by the Grid Manager include:

- among Grid Participants (e.g. Seqwater, LinkWater and Distribution Entities)
- with State agencies (e.g. Queensland Health)
- with Federal agencies (e.g. Department of the Environment, Water, Heritage and the Arts; National Water Commission)
- with Emergency Services.



The Grid Manager also acts as a central point for sharing or coordinating a variety of resources, such as:

- sharing plans and tools among Grid Participants (e.g. Seqwater, LinkWater and Distribution Entities)
- coordinating and providing mutual assistance
- solving short-term staff and equipment shortages for incident management by sourcing loans from other Grid Participants.

For the purpose of communication and sharing information between Grid Participants, the Grid Manager has introduced special software known as "OCA Incident Manager". The role of the Principal Incident and Emergency Management Coordinator will be to assist the Incident Manager and all team members to manage the grid wide information and communications through this process.

#### Amendments to Grid Instructions

Under section 4.15 of the Market Rules, the Grid Manager can issue new Grid Instructions:

- when there is a change in circumstances, such as distribution and storage capacity
- for any reason that the Grid Manager, at its discretion, considers appropriate.

During emergencies, the Grid Manager is to assess the impact upon security of supply and ability to meet Grid Customer demand, and issue new Grid Instructions as necessary. Seqwater may be required to provide the Grid Manager with access to timely, accurate and verified information.

#### Continuous reassessment

Risk assessment needs to be a continuous process throughout the entire emergency response.

The initial incident severity classification may require adjustment as the incident and its wider impacts evolve and are better understood. As the emergency continues, the Emergency Management Team should reassess the risk classification in view of its changing perspectives and impact.

Reassessment should also follow milestones in managing the emergency and recovery, or as often as deemed necessary, depending on the nature of the incident.



### **Sequater Incident and Emergency Response Plan**

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### **Identify and Assess Incident**

**Overview** 

This section focuses on the need to identify and assess the initial incident level and to ensure appropriate records are maintained.

An integral part of incident management is the identification of potential incidents before they eventuate and adversely impact upon our business. For that reason an "Alert" process has been developed and forms part of the Seqwater internal incident management processes. The Grid Manager has also emphasised the value of alert as a means to prepare for or to mitigate potential incidents and users of this document need to be aware of the Alert phases used by both organisations.

The two types of Alert levels are:

- Alerts adopted by Seqwater in order to prepare for, or to mitigate potential incidents and
- Alerts issued to the Grid Manager which are enacted when:
  - The incident is currently Level 1 or 2 but has potential impacts that if escalated would trigger a level 3 -5 emergency
  - The event has not yet occurred, however is considered likely to be imminent with a level 3-5 severity.

Details of the "Alert" process are given below followed by the more recognised incident levels.

#### Incident Alerts

The **Incident Alert** has been developed to mitigate incidents or potential incidents that may have adverse impacts upon a number of key business areas. Internally, this alert phase is designed to offer managers and supervisors a "heads up" to potential consequences or occurrences.

However, if the risk identified has the potential to impact upon other Water Grid participants, it is necessary to engage the Grid Manager to develop and implement any required mitigation measures and contingencies.

The intent of declaring Incident Alerts is to ensure that any perceived problems are addressed and any risks associated are mitigated.

#### Reporting an incident

Information about an incident may be received via a number of avenues, these include, however are not limited to the following:

- 1. Report from a member of the public or the media
- 2. A report by a Seqwater Staff Member
- 3. A remote alarm



- 4. Calls to the 1800Seqwater after hours line
- 5. Report or advice from a Water Grid participant (Grid Manager, LinkWater)

Once the information has been received it is to be assessed against the incident severity table, and the incident level assigned according to the criteria detailed in Table 8.

All Seqwater staff are to report what they see as potential risks or actual incidents to their immediate supervisor.

In the event that their immediate supervisor cannot be contacted they are to report it to their coordinator/manager or the Principal Coordinator, Incident and Emergency Management on 0400 302 796.

For after hours alerts or incidents where a supervisor or manager cannot be contacted the Seqwater Incident Management hotline is to be called and the issue reported. The Incident Management hotline number is 1800Seqwater (1800 737 928 37).

### Authority to Declare an Incident or Alert

Employees described in the following table have the authority to declare an alert or incident at any of the 5 defined incident levels.

Table7: Persons Authorised to Declare an Incident or Alert

Authority to Declare an Incident or Incident Alert			
CEO	Executive	Management	
Chief Executive Officer	Executive GM-Water Delivery	Manager Dam Operations	
	Executive GM- Business Services	Manager Water Quality	
	Executive GM-Asset Delivery	Manager WTP Operations North	
	Executive GM-OD	Manager Group Support And	
		Catchment Services	
		Manager Infrastructure	
		Maintenance	
		Manager WTP Operations North	
		Manager Strategic Relations And	
		Communications	
Authority to Declare an Incident or Incident Alert			
Other Employees			
OHS Coordinator P	rincipal Risk Adviser F	Principal Coordinator Incident And	
	E	mergency Management	



The IERP framework has a specific function and authorised officers should not use the process for tracking of actions or projects nor should it be used to raise issues as an alternate process to existing governance arrangements.

### Identify and Assess

The following actions are to be implemented by a Seqwater staff member witnessing an incident. These actions relate mainly with incidents at an operational level, however they are to be used as a guide for all incidents irrespective of location or group within Seqwater.

#### First Person Aware

- Undertake an initial assessment of the incident if deemed safe to do so.
- Ensure the safety of all staff, contractors, visitors and the community (refer to safety checklist available on Q-Pulse).
- Promptly advise supervisor / coordinator or manager of the incident details and provide any necessary information, including any initial incident response details. For after hours incident call 1800Seqwater (1800 7379 2837) and advise the call centre operator of details. The Principal Coordinator, Incident and Emergency Management can also be contacted on for all incidents and alerts.
- Take command of the site if no supervisor / coordinator is present.
- If in an operational area respond immediately to secure the site and make safe.
- Provide a verbal report and handover to the Incident Manager or operational response team upon arrival to the site.
- Other actions that may be required include:
  - a. Direct all media issues to the Strategic Relations and Communications Team
  - b. Direct all enquiries received from regulators or Grid Manager to the Incident Manager
  - Continue to act in command of the incident site until relieved or directed otherwise by the Incident Manager or operational response team
  - c. Determine from the operational response team if you are required to stay to assist in the ongoing management of the incident

The above process is shown diagrammatically in attachment D.

### Determining Incident levels

The following tables detail the incident classifications and criteria that form the basis of this Emergency Response Plan.

In situations where an incident level is not clearly defined by Table 8, determination of the incident level is at the discretion of the Manager, Operations. The Grid Manager retains the overriding right to determine incident levels.



While the 'public reassurance' criterion may not always seem an active concern at the outset, it is important to consider the likelihood of media attention and the risk of negative coverage when considering incident levels.



**Table 8: Incident severity classification levels** 

Document Number: ERP-00001

Document Owner: D. Roberts

Level 1 – Insignificant			
General principles	Incident criterion – d	irect impacts on water supply	Examples
<ul> <li>Little disruption to normal operations, low increase in normal operating costs</li> </ul>	Water quality	A critical control point alert exceeded but within critical limits     Insignificant impact, little disruption to normal operation	Local water quality incident isolated to a zone; possibly caused by valve change
<ul> <li>Local incident with impact limited to a single facility within one Grid Participant</li> </ul>	Water asset failure	Minor unplanned asset failure – no facility output affected	Localised pump breakdown; minor burst in a suburban street within distribution
Overall system impact limited to temporary or no	Water quantity	<ul> <li>Limited or no impact on bulk Grid Customers</li> <li>Minor short-term disruption to retail Grid Customers</li> </ul>	Early indications of blue-green algae – storage being monitored
<ul> <li>reduction in capacity</li> <li>No effect on monthly Grid Instruction volumes</li> </ul>	Security and natural disaster	Localised natural disaster damage	Minor storm damage to asset
Minor or no impact on bulk	Incident criterion – a	ncillary impacts associated with water supply	Examples
<ul> <li>Grid Customers</li> <li>Minor short-term impact on a small number of retail Grid Customers</li> <li>Managed by the resources of</li> </ul>	Health and safety of employees or public	Low risk of other injuries     Brief pollution event but no environmental impact.	<ul> <li>Slip or fall resulting in lacerations requiring first aid</li> <li>Minor spike in discharge concentrations</li> </ul>
the affected Grid Participant without the need to notify other Grid Participants,	Public reassurance	Insignificant risk of breaching environmental regulatory requirements  • Lack of public interest (e.g. reporting, not front page) in	Single adverse local radio report
Emergency Services or the Grid Manager	rubiic reassurance	suburban newspapers	<ul> <li>Call centre receives a number of complaints but limited to a small area, e.g. a street or two</li> </ul>
<ul> <li>These incidents occur as part of normal operations and are managed by a site supervisor or relevant duty officer as part of their normal responsibilities</li> </ul>			

Version Date: 25/10/2010 Document Approver: D. Roberts



Level 2 – Minor			
General principles	Incident criterion – d	irect impacts on water supply	Examples
<ul> <li>Minor or no impact on bulk Grid Customers</li> <li>Minor short-term impact on a small number of retail Grid Customers</li> <li>The incident has no effect on monthly Grid Instruction volumes</li> <li>Can be handled within the scope of normal operating protocols between Grid Participants</li> <li>Can be dealt with by the resources of the affected</li> </ul>	Water quality	<ul> <li>Critical control point limits exceeded, even with corrections in place:         <ul> <li>still within Australian Drinking Water Guidelines (2004) health values</li> <li>minor impact for small population, some manageable operation disruption</li> </ul> </li> </ul>	Turbidity increased to 1.2 NTU due to lime dosing but reduced to 0.8 at exit of clear water storage
	Water asset failure	<ul> <li>Unplanned asset failure and reductions to asset output, less than or equal to one day duration where:         <ul> <li>supply is reduced, but not lost</li> <li>supply can be sourced from elsewhere if necessary</li> </ul> </li> </ul>	<ul> <li>A mechanical failure occurs at a water treatment plant and the estimated time to repair the failure exceeds the current endurance of the clear water storage. Seqwater contacts the Distribution Service Provider who reduces the water demand from the water treatment plant to allow time for the rectification works</li> </ul>
	Water quantity	Single raw water supply source within the Water Grid is showing indications of failure	Blue-green algae bloom or major turbidity event occurs whereby use of a single supply source needs to be reduced
Grid Participants	Security and natural disaster	Localised natural disaster damage	Storm causes minor interruptions due to loss of power supply
	Incident criterion – a	ncillary impacts associated with water supply	Examples
	Health and safety of employees or public	<ul> <li>Employee medical attention required – restricted work duties or limited lost work time. Public injury</li> <li>Inherent risk for more injuries. Immediate action to be taken at Grid Participant level to ensure public safety</li> </ul>	<ul> <li>Slip or fall resulting in broken limbs, lacerations requiring stitches or hospitalisation.</li> </ul>
	Environment	<ul> <li>Minor transient environmental impact</li> <li>Low risk of breaching environmental regulatory requirements</li> <li>Grid Participant level corrective action</li> </ul>	A spike in discharge concentrations but unlikely to exceed 95 percentile licence limits
	Public reassurance	Public questioning of Water Grid operations and decisions for local assets (e.g. local newspaper)	Short-term adverse media at a local level     Call centre receives a number of complaints, but limited to one suburb

Document Number: ERP-00001 Version Date: 25/10/2010 Document Approver: D. Roberts

Document Owner: D. Roberts



Alert		
General principles	Incident criterion	Examples
<ul> <li>Classification for incidents with a possible severity of 3–5 where the consequences have not yet occurred</li> <li>A potential Level 3–5 incident is considered highly likely to be imminent</li> </ul>	Water quality	E. coli has been detected, and an Alert is raised while a re-sample is carried out to confirm the contamination event (see 'Attachment E: E. coli Alert escalation process')
<ul> <li>An incident has occurred with severity below Level 3, however, there is a possibility that further deterioration of the situation will breach a Level 3–5 threshold</li> <li>An incident has occurred with severity below Level 3, however, the</li> </ul>	Security and natural disaster	<ul> <li>Natural disaster, such as cyclone, flood, fire, etc., forecast or in progress and likely to cause an impact, though this has not yet happened</li> <li>National counter-terrorism Alert level is raised one level</li> </ul>
Grid Participant has notified the responsible Minister/s of media interest or other circumstances of interest, and therefore must also notify the Water Grid Manager	Public reassurance	<ul> <li>Any incident or potential incident that has /could attract media interest, making negative coverage a possibility</li> </ul>
<ul> <li>The Water Grid is on standby to manage a potential incident</li> <li>Where possible, relevant Grid Participants/Water Grid Manager</li> </ul>		
<ul> <li>take action in advance to prepare for the incident eventuating</li> <li>When the incident eventuates, reclassify its severity level in accordance with this Plan</li> </ul>		



General principles	Incident criterion -	direct impacts on water supply	Examples
<ul> <li>Minor impact for a large population</li> <li>Major impact for small population</li> <li>Minor impact for</li> </ul>	Water quality	<ul> <li>Australian Drinking Water Guidelines (2004) health values confirmed as exceeded <sup>1, 2</sup></li> <li>Aesthetic impact for large population, but manageable through modification to operations</li> </ul>	<ul> <li>Chlorine in a service reservoir is low and <i>E. coli</i> has been detected, re-sampled and confirmed</li> <li>The reservoir is required to be dosed with chlorine and mixed with fresh water for dilution</li> <li>A chronic health guideline value is exceeded, e.g. total trihalomethanes, with n associated public health risk</li> </ul>
retail Grid Customers  The Water Grid Manager may issue new Grid Instructions  Can be dealt with within operating protocols but not 'normal'  Water asset failure  Water quantity  Security and		<ul> <li>Significant unplanned asset failure and reductions to asset output greater than one day duration, and may impact Grid Contract obligations being met</li> <li>Any single supply source failure</li> </ul>	<ul> <li>Unplanned halt to production by water treatment plant for longer than 24 hours, resulting in failure to meet Grid Contract obligations and interruption to customer supply to a small population for less than 8 hours</li> </ul>
	Water quantity	<ul> <li>Single raw water supply source within the Water Grid is out of service whereby supply is affected by &gt;20% of Grid Instruction volume</li> </ul>	<ul> <li>Single raw water supply source taken offline due to blue-green algae or other event</li> <li>The period to rectify the problem exceeds 12 hours or is likely to result in low levels in the local storage reservoirs</li> </ul>
	Security and natural disaster	Natural disaster or security event that would disrupt operations and/or service delivery	<ul> <li>Poison containers found at water storages</li> <li>Large fire occurs in a major catchment area</li> </ul>
•	Incident criterion -	ancillary impacts associated with water supply	Examples
	Health and safety of employees or public	<ul> <li>Single fatality involving an employee or a member of the public</li> <li>Significant risk of further injuries</li> <li>Immediate corrective action by Grid Participant</li> </ul>	A drowning occurs within the assets of a Grid Participant
	Environment	<ul> <li>Significant release of pollutants with mid-term recovery</li> <li>High risk of environmental regulatory requirements breach with the potential to affect drinking water supply works</li> <li>Notification of an incident to a regulator</li> </ul>	<ul> <li>Exceedence of a concentration limit whereby the Queensland Manufactured Water Authority cannot access water from a sewage treatment plant</li> <li>Exceedence of a discharge licence where discharge is likely to make its way to a drinking water source</li> </ul>
	Public	Public questioning of Water Grid operations and decisions for local	Medium- term adverse media at a regional or State level, such as large increaso



reassurance assets (e.g. regional newspaper, regulator enquiry) in volume of adverse calls to call centre

Seqwater chlorine level exemptions apply (Attachment E)

Level 4 – Major			
General principles	Incident criterion –	direct impacts on water supply	Examples
<ul> <li>Single or multiple regions affected. Multiple Grid Participants and the Water Grid Manager with State Government departments</li> </ul>	Water quality	Major impact for small population, systems significantly compromised and operation ceased or abnormal     Significantly enhanced level of monitoring required	<ul> <li>Cryptosporidium event at a minor water treatment plant only supplying an isolated small town, which results in a Boil Water Notice being issued</li> <li>There are repeated exceedences of a chronic health guideline value affecting a small population, e.g. total trihalomethanes, where Queensland Health or The Regulator determines there may be a risk to public health</li> </ul>
<ul> <li>involved or on standby</li> <li>Minister may issue a Water</li> <li>Supply Emergency</li> <li>Declaration</li> <li>Moderate impact for a large</li> </ul>	Water asset failure	<ul> <li>Major unplanned asset failure leading to service interruptions – days to weeks to rectify</li> <li>Impacts on Grid Contract obligations or multiple Grid Customer disruptions</li> </ul>	<ul> <li>Any water treatment plant that cannot produce water to serve the local community and the Water Grid cannot fully meet demand, resulting in interruption to customer supply for over 8 hours. Local area needs to go on restrictions, e.g. water treatment plant supplying isolated local government area</li> </ul>
population or major impact for a small population	Water quantity	Drought trigger is reached within any Water Grid supply reserves	Future drought declaration – restrictions implemented
Major impact for Grid Customers The Water Grid Manager is likely to issue new Grid	Security and natural disaster	Localised natural disaster or security event	<ul> <li>Fire has destroyed a single water treatment plant</li> <li>Credible threat to major infrastructure within the Water Grid received by a Grid Participant or the Government</li> <li>Australian pandemic Alert phase 6a, 6b or 6c<sup>3</sup></li> </ul>
Instructions (depending on the type of incident)	Incident criterion –	ancillary impacts associated with water supply	Examples
<ul> <li>The Water Grid Manager may need to access the Seqwater or LinkWater control (or</li> </ul>	Health and safety of employees or public	Multiple fatalities	Accident caused by water craft on recreational waters resulting in multiple fatalities
<ul> <li>incident) rooms to obtain real time data and information</li> <li>Impacts on drinking water regarded as relatively shortterm, but involving multiple</li> </ul>	Environment	<ul> <li>Significant long-term environmental effects with the potential to affect drinking water supply works</li> <li>Significant risk of breaching environmental requirements long-term (weeks)</li> </ul>	<ul> <li>Major release of water treatment plant sludge into a water course</li> <li>Major sewage spill upstream of a water treatment plant</li> </ul>
Water Grid entities and government agencies	Public reassurance	Public confidence in Water Grid operations diminished and looking to validate information decisions (e.g. national TV	<ul> <li>Adverse State-wide or national media attention</li> <li>Call centre receives a number of complaints related to multiple suburbs or two or</li> </ul>

Version Date: 25/10/2010 Document Approver: D. Roberts



news and/or regulator investigation)	more retailers
	<u> </u>

<sup>&</sup>lt;sup>3</sup> Depending on Water Grid impacts assessment



Level 5 – Catastrophe			
General principles	Incident criterion – d	irect impacts on water supply	Examples
Large-scale impact across     South East Queensland,     other utilities affected.     Requires Government     intervention at State and     Federal levels to manage the     incident	Water quality	<ul> <li>Major impact for large population, extreme volume of complaints</li> <li>Complete failure of systems</li> </ul>	<ul> <li>Cryptosporidium event at a major water treatment plant which results in a Boil Water Notice being issued for a region</li> <li>There are repeated exceedences of a chronic health guideline value affecting a large population, e.g. total trihalomethanes, where Queensland Health or the Regulator determines that there may be a risk to public health or a public health risk is confirmed</li> </ul>
<ul> <li>Minister is likely to issue a         Water Supply Emergency         Declaration</li> <li>Major impact for large</li> </ul>	Water asset failure	Extreme unplanned asset failure – weeks to months to rectify     Major rectification works to re-establish water supply	Dam wall breach
populations, complete failure of systems	Water quantity	Drought supply reserves are reaching the emergency volumes	Extreme restrictions apply and emergency supply projects instigated
<ul> <li>An emergency incident or combination of incidents with the potential for large- scale short- and long-term</li> </ul>	Security and natural disaster	Extreme natural disaster or security event	<ul> <li>Bomb blast impacts major asset</li> <li>Flood, fire and cyclone impacts on multiple assets</li> <li>Australian pandemic Alert phase 6a, 6b or 6c <sup>4</sup></li> </ul>
impacts to human well-being	Incident criterion – a	ncillary impacts associated with water supply	Examples
and the environment including terrorism impacts or natural disasters	Health and safety of employees or public	•	Breach of dam wall causing flooding and multiple casualties
	Environment	<ul> <li>Catastrophic, long-term environmental impacts with the potential to affect drinking water supply works</li> <li>Extreme risk of breaching environmental regulatory requirements. Immediate notification of relevant authorities</li> </ul>	Any incident causing the loss of a water source for more than one month, or the loss of an entire ecosystem
	Public reassurance	Widespread concerns expressed by public and loss of trust in Water Grid operations (e.g. international TV news headlines and/or government investigation)	<ul> <li>Adverse national or international media attention</li> <li>Call centre receives an extreme number of serious complaints</li> </ul>

Document Number: ERP-00001

Document Owner: D. Roberts



	related to multiple retailers
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## Information Management

The Principal Coordinator, Incident and Emergency Management shall ensure an Incident Folder is created when an incident or incident alert has been declared. The folder will be identified in the form of yyyymmdd (date the incident commenced) followed by the incident name. The incident folder shall be located in a directory accessible by all staff. All related incident information is to be retained within the folder whilst the incident is open. Upon incident closure the information from the folder is to be transferred to Q-Pulse under the INIR number allocated when the incident was recorded. Detailed instructions for the establishment of an incident folder are detailed on procedure **PRO-00860** "Administration of Incident & Emergency Response Information". This procedure is located within Q-Pulse.

Record keeping is key to successful incident and emergency management. For that reason the following instructions are to be adopted in all Alert and incident processes:

Immediately the incident is identified or notified, Seqwater must keep a incident record log of all relevant communications, meetings, events and actions arising from the emergency. Details captured must include:

- Entry date and time
- Type Phone call, email, meeting
- Participants
- Location
- Description
- Actions arising

All information is to be stored in the Incident Folder Located in G:/Projects/Incidents

Document Number: ERP-00001
Document Owner: D. Roberts



# **Notifications**

## Internal Notifications

Upon the declaration of an incident within Seqwater, a communiqué via email and/or SMS shall be distributed to the members of the incident management email group comprising of the CEO, level 2 and 3 reports and other key staff across the organisation.

Upon receipt of this information members are to undertake the following if the incident impacts upon their areas of responsibilities:

- Assess the details contained within the declaration;
- Seek clarity on any details contained within the incident declaration email with the nominated Incident Manager (if required);
- Nominate staff within their areas of responsibility to form part of the Incident Management Team (if required);
- Distribute details of the incident to members of their team (if required).

Seqwater shall communicate all incidents in an open and honest manner to ensure transparency against all decisions made and associated actions taken. There shall be instances when an incident occurs and the communications of such needs to be limited initially to identified stakeholders. This is to ensure the Executive Management Team, the Strategic Relations and Communications Team and the Incident Management Team have developed appropriate communication statements and strategies, assessed legal and regulatory implications and other required action plans before being communicated to a wider audience.

## External Notifications

It is paramount that Seqwater coordinate and controls communications with its external stakeholders and the media. Therefore, all communications with regulators and statutory reporting requirements are to be coordinated where ever possible via the Incident Manager and the Strategic Relations and Communications Team. In addition all media queries are to be directed to the Strategic Relations and Communications Team for an appropriate response.

Seqwater must notify the Grid Manager of incidents declared and classified as level 3, 4 or 5 and also Alerts that have the potential to be declared as level 3, 4 or 5. **The Incident Manager shall be responsible for communicating the incident information to the Grid Manager**. The protocol for communicating incidents to the Grid Manager is in the first instance by telephone then via the intranet incident communication tool; "OCA Incident Manager" and is limited to authorised members of the incident management team.

Timeframes for notification of incidents vary from 1 to 2 hours upon declaration of the incident and these are detailed in the table below. Level 3, 4 & 5 incidents are to be communicated to the Grid Manager upon declaration by both telephone and email <a href="mailto:notifications@">notifications@</a> Form REF-00008



must be completed and attached to the email. Completed forms are to be scanned and retained within the incident folder.

Contact details for the WGM **Media Manager** are: Tel: ; Mob: Email: media@

In addition to notification timeframes to the Grid Manager, the following table also details other key regulatory bodies that must be informed of incidents and emergencies. Further details are provided in the next sub-section however in summary they are:

**Table9: Notification responsibilities** 

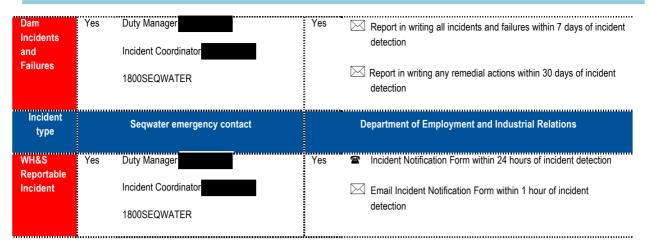
	Incident level		Seqwater emergency contact	Water Grid Manager Duty Manager		
	lert, levels and 2	Yes	Duty Manager	No		
			Incident Coordinator  1800SEQWATER			
A	lert	Yes	Duty Manager	Yes	<b>~</b>	Within 2 hours of incident detection
			Incident Coordinator  1800SEQWATER			Email Incident Notification Form within 2 hours of incident detection
3		Yes	Duty Manager	Yes	2	Within 2 hours of incident detection
			Incident Coordinator		$\bowtie$	Email Incident Notification Form within 2 hours of incident detection
			1800SEQWATER			
4	and 5	Yes	Duty Manager	Yes	<b>2</b>	Within 1 hour of incident detection
			Incident Coordinator  1800SEQWATER			Email Incident Notification Form within 1 hour of incident detection

Incident type	Seqwater emergency contact	Office of the Water Supply Regulator		
Breach of Water Quality Parameter	Yes Duty Manager Incident Coordinator 1800SEQWATER	Yes Motification within 3 hours of detection  Email Incident Notification Form Part A within 24 hours of incident detection		
Incident				
type	Seqwater emergency contact	Dam Safety Regulator		

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 36 of 3

Document Owner: D. Roberts Document Approver: D. Roberts





## Notify Office of the Water Supply Regulator of serious breach of water quality parameters

Seqwater, under section 270 of the Water Supply (Safety and Reliability) Act 2008 has a statutory obligation to notify the Office of the Water Supply Regulator (Department of Environment and Resources Management) of breaches to water quality parameters. Notification of the incidents is to be provided via the OWSR incident hotline and notification form – Part A within 3 hours of being aware of the event. Incident Notification Form Part A can be located in Q-Pulse as FRM-00139. The incident notification form is to be completed by the Water Quality Product Team. Completed forms are to be scanned and retained within the incident folder. A detailed procedure PRO-00707 is also included within Q-Pulse and should be referred to when a breach is identified.

## Notify Dam Safety Regulator of Incidents and Failures

For dams having a population at risk in the event of a failure (Seqwater has 25 such dams), dam safety conditions are issued under section 356 of the Water Supply (Safety and Reliability) Act 2008. The general standard clauses within these conditions relating to incident and failure notifications to the Dam Safety Regulator are as follows:

#### **Condition DS 13 - Emergency Action Plans and Event Reports**

- The dam owner must prepare and maintain an Emergency Action Plan in accordance with the requirements of the *Queensland Dam Safety Management Guidelines February 2002.*
- In the event of an emergency, the dam owner must notify the Chief Executive, Department of Natural Resources and Mines within forty-eight (48) hours. The notification shall include a brief description of the event and the time of activation of the Emergency Action Plan.
- Within thirty (30) days of the event the dam owner must prepare an Emergency Event Report and provide a copy of the report to the Chief Executive, Department of Natural Resources and Mines.

#### Condition DS 2 - Incidents and Failures

- In addition to the requirements detailed within the Emergency Action Plan, the dam owner must report in writing all incidents and failures (as defined in the *Queensland Dam Safety Management Guidelines February 2002*) to the Chief Executive, Department of Natural Resources Mines and Water, within seven (7) days of becoming aware of the incident or failure.
- The dam owner must advise the Chief Executive, Department of Natural Resources Mines and Water of any proposed remedial actions in writing within thirty (30) days of the incident or failure.

Notify Department of Employment & I.R. of serious safety breaches



Seqwater is obligated under the *Workplace Health and Safety Regulation 2008* to notify the Department of Employment and Industrial Relations, Workplace Health and Safety Queensland of certain occurrences at Segwater workplaces. These occurrences include:

• serious bodily injury; or

work caused illness; or

dangerous event.

If the workplace incident causes the death of a person, Seqwater must notify Workplace Health and Safety Oueensland.

Under the *Electrical Safety Regulation 2002,* Seqwater must notify the Electrical Safety Office or Workplace Health and Safety Queensland of the following incident or event:

a serious electrical incident; or

dangerous electrical event.

An Incident Notification form (<u>form3</u>) must be lodged within 24 hours of a reportable incident occurring. Immediate notification by phone or fax is required if the incident involves a death. Notification of incidents must be coordinated through the OH&S Manager.

### Department of Environment and Resource Management

Seqwater communicates with the Queensland environmental regulator (Department of Environment and Natural Resources - DERM) on matters relating to the ongoing management of environmental matters. Seqwater has an obligation to contact DERM when there are issues or incidents where compliance may not be achieved.

#### Specifically:

- Seqwater has an obligation to contact the administering authority (DERM) under section 320(EP Act 1994) after becoming aware of serious or material harm or potential harm, as a result of any of our activities.
- Seqwater is obliged to conform with all approval conditions where applicable as required in Part 2A, section 435 (EP Act 1994).
- Seqwater shall follow its general environmental duty as in Part 1 (section 319 of the EP Act 1994) in instances were approval conditions do not apply.

The process where Seqwater is required to contact DERM in regard to an environmental incident is documented in Seqwater Work Instruction PRO-00766: WTPs – Discharges from Water Treatment Plants. This addresses initial notification through to the preparation and submission of an incident investigation.

Seqwater also notifies DERM in the case of an emergency under of the ROP process. An Emergency report is required when Seqwater cannot comply with a rule in a ROP i.e. unable to supply water, due to an emergency incident.

This notification is issued in the	ne form of an email which includes details of the emergency incident, the nor
compliance and responses or	actions carried out. Emails are issued to Julie.bridgeman@
Bruce.Bass@	and WMSReportingSubmissions@

Communication with Stakeholders during an Incident



As incidents are declared there is a requirement to communicate information pertaining to the incident to identified stakeholders. Once the incident has been declared and an incident level applied, the following table can be applied to identify stakeholders. It is mindful to note that the table below is for *indicative purposes only*. The Incident Manager and the Principal Coordinator, Incident and Emergency Management shall assess communication requirements as incidents are declared in close consultation with the Strategic Relations and Communications Team.

The Incident Manager should confirm with the Grid Manager which stakeholders they have notified.

Table 10 – Stakeholder Identification Table

Incident Level	Seqwater Incident Management Group	Grid Manager	Other impacted Grid Participants	QWC / DERM / Office of the Water Supply Regulator/ Dam Safety Regulator	Queensland Health (major drinking water health-related incident)	Queensland Police Service	Department of Community Safety (Emergency Services)	Departmentof Employment, Economic Development and Innovation
Internal Alert	•		•					
Level 1	•		•					
Level 2	•		•			pa	p	pa
External Alert	•	•	•	•		As Required	As Required	As Required
Level 3	•	•	•	•	•	∢	₫	₫
Level 4	•	•	•	•	•			
Level 5	•	•	•	•	•			

For Levels 3, 4 &5 incidents, Seqwater communicates with the Grid Manager via the Incident Management Software, however an alternate single point of contact in every case will be the Incident Manager or if nominated by the Incident Manager a representative from the Strategic Relations and Communications Team. The nominated person must be available for contact 24 hours a day. The nominated person is to keep the Grid Manager informed of how the Incident is being managed together with emerging risks that may have an adverse impact upon other Grid Participants. Level 3, 4 & 5 incidents are to be communicated to the Grid Manager upon declaration by both telephone and email to notifications@

Form REF-00008 must be completed and attached to the email.

Establish communications with identified Water Grid Participants



For all Level 3 incidents and above contact at operational level should be established with impacted or potentially affected Water Grid participants.

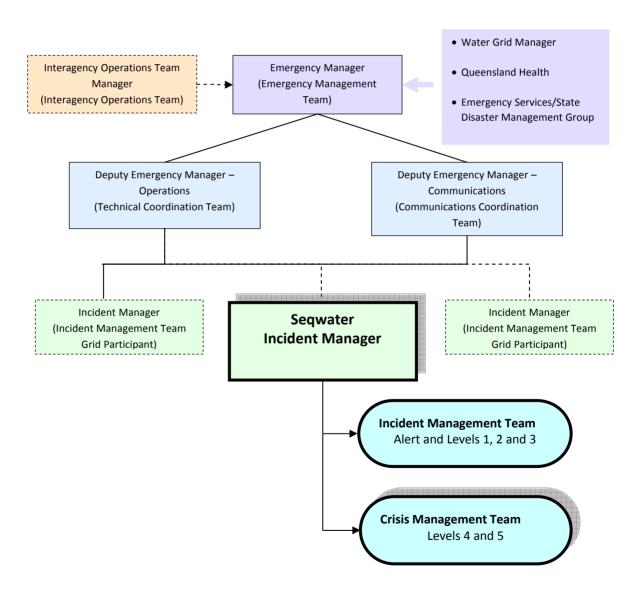
Establish Command and Control

The division of Command and Control functions between Seqwater and the Grid Manager is a correlation between Emergency Management and Incident Management.

## Team Structures (Incident & Emergency Response)

The integration of incident and emergency management team structures with SEQ Water Grid Manager and Seqwater are respectively as follows:

Figure 3: Emergency Response Team structure



Seqwater's Incident and Emergency Response structure is a flexible team-based approach that parallels the normal management regime. The team based structure is detailed in the diagram labelled figure 4.

Document Number: ERP-00001 Version Date: 25/10/2010 Page Document Owner: D. Roberts Document Approver: D. Roberts



## Segwater Incident Structure - Alerts, Levels 1, 2 and 3

Upon declaration of an alert or level 1, 2 or 3 incident, the Incident Manager will form an Incident Management Team and also manage the operational response to the alert or incident.

The Incident Management Team and the Operational Response Team can be the one group and in most instances will be the same. There will be instances where this is not possible due to the location of the event. The Operational Response Team will have clear reporting and communication lines to members of the Incident Management Team and the Incident Manager.

The Incident Manager and the Incident Management Team will call upon the support of different specialists across Seqwater as and when required. The Incident Manager must also keep his direct line executive manager up to date on events relating to the management of the incident and escalate issues that cannot be resolved for their action.

Incident Managers will be assigned the necessary support by the Executive Leadership Team to enable the efficient and effective resolution of an incident or emergency.

## Confirm Key Incident Management Team appointments with Managers or EGM's

The Incident Management Team must be set up and functioning within a short timeframe in order to direct response and recovery actions. Therefore upon declaration of an incident it is important to quickly identify the Incident Manager and key Incident Management Team members, irrespective of the structure utilised for the management of the incident. In most instances the CEO, relevant EGM or Manager shall notify the Principal Coordinator, Incident and Emergency Management of the Incident Manager.

The Incident Manager shall nominate Incident Team Members and shall confirm their appointment with the relevant EGM or Manager. Confirmation of appointments are required to ensure the identified person can be released to assist with the incident and their current workload priorities can be re-assigned to other staff or put on hold until the Incident is resolved. If in the event the nominated staff member cannot be released to participate as an Incident Team Member the relevant EGM or Manager is to nominate another person within their area of responsibility.

### Notify those people identified to form the Incident Management Team

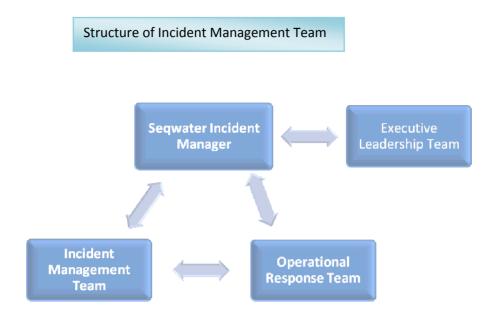
Upon confirmation of the Incident Management Team appointment, the Incident Manager is to advise the nominated team member of such together with what their responsibilities will entail and a status report on response activities. In addition, notify the Incident Management Team of the initial team meeting time and meeting objectives.

### Assemble Incident Management Team and required support elements

As soon as an initial assessment of the incident has been made, Incident Management Team members shall meet to establish what support element will be required to effectively respond and recover from the incident. A current situation report is to be provided by the Operational Team Leader (at the site) or Incident Manager and an assessment of what other technical or functional support is required. Upon identification of required support, the personnel and other resources are to be despatched to the incident site. For any support that is outside the Incident Manager's normal control, a request is to be made to the relevant EGM or Manager who is to arrange the necessary resources and support requested by the Incident Manager.



Figure 4 - Incident Management Team - Structure



## Incident Management Structure

Routine declared incidents (level 1 and 2) and internal incident alerts will in the majority of instances be managed at a Manager / Coordinator and operational / functional team level and will not require the full activation of this plan and all its associated requirements.

The management of alerts, incidents and emergencies within Seqwater will be undertaken in a structured manner. The management structure will vary depending upon the nature of the incident, its severity and implications for the company. For alerts and level 1, 2 and 3 incidents a team based approach will be utilised to manage and respond to alerts and incidents as they occur. Levels 4 and 5 incidents will be managed through an executive management crisis team.

In managing incidents declared as a WGM alert or level 3, 4 or 5 Seqwater shall also consider the requirements of the command and control function of the Grid ERP and where required and if requested provide the necessary resources to support this function.

### The Support Group

Seqwater will provide functional and operational support via the Incident Management Team to the Operational Response Team. Requests for support may come in the form of:

- General management support
- Internal and external communication
- Information technology & communication
- Finance
- Scientific analysis

- Media management
- Human resources
- Legal
- Water quality advice
- Dam safety

Other support may be sourced from outside the organisation as required.

Document Number: ERP-00001 Version Date: 25/10/2010

Document Owner: D. Roberts Document Approver: D. Roberts



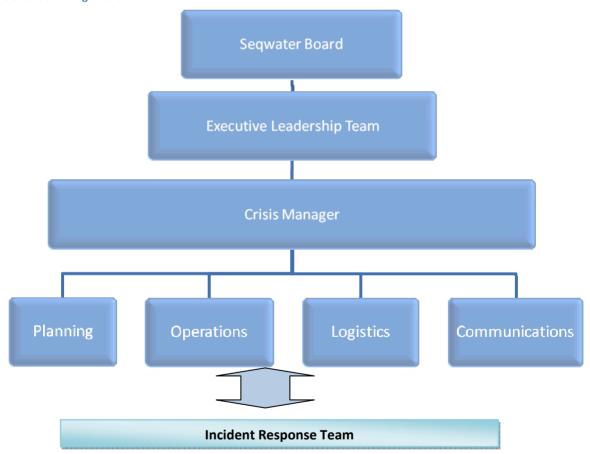
## Checklists for Incident and Support Staff

Checklists have been designed to assist key incident team members and support staff to meet their responsibilities in relation to an incident or an Incident Alert under both the Team Based and AIIMS structure. These checklists are provided as a ready reckoner/memory aide for various roles that maybe required when responding to a specific alert or incident situation. The Crisis Management Team (as shown below) will determine which roles are required as part of the incident and the checklists can be referred to in order to provide guidance.

### Segwater Incident Structure - Level 4 and 5

For the management of level 4 and 5 incidents Seqwater has adopted a structure of clear delegation to ensure that all management and information functions, including incident control, operations, planning and logistics, are adequately performed. The structure also provides for the command and coordination of multi-agency incidents which would be expected for level 4 and 5 incidents.

**Figure 5: Crisis Management** 



Team

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 43 of 3
Document Owner: D. Roberts Document Approver: D. Roberts



## Crisis Management Team

An Executive General Manager shall in most instances be appointed as the Incident Manager when the crisis is declared.

In the event that a level 4 or 5 incident is declared and the AIIMS structure is put into place there will also be a requirement for Seqwater to provide support to the Incident Manager and the incident management and response team.

## Incident Management Roles under Crisis Management Team

As detailed previously, the structure detailed above shall be put in place for level 4 & 5 incidents and emergencies. The primary Incident Management Team roles are:

Role	Scope of Function
Incident Manager	<ul> <li>Responsibility for the management of all activities undertaken to control the incident;</li> <li>Determination of which incident management roles are required depending on the size and nature of the incident</li> <li>Management of the interface with organisations and people working outside the incident management structure</li> <li>Management of the interface with organisations, communities and people affected by or likely to be affected by, the incident; and</li> <li>Responsibility for having a health and safety focus throughout management of the incident</li> </ul>
Communications	<ul> <li>The scope of the communications function is almost exclusively involved with the control and flow of information internally and externally to Seqwater. It provides support for control of the incident through:         <ul> <li>Consultation with the Public Affairs Manager and the Incident Manager to provide relevant media advice, strategy support and assistance to the Incident Management Team and Site Team as required</li> <li>Coordinate the management of the internal / external communications</li> <li>Coordinate the flow of information between the Incident Team and, Executive Leadership Team and all external stakeholder (inter-government interface)</li> <li>Liaison with the Grid Manager and other regulators in terms of operational response and planned action</li> </ul> </li> </ul>
Planning	<ul> <li>The scope of the planning function is almost exclusively involved with information management. It provides support for control of the incident through:         <ul> <li>Collection, evaluation and dissemination of information on the current and forecast situation</li> <li>Preparation and dissemination of the plans and strategies that are to be used in controlling the incident</li> <li>Collection and maintenance of information about the resources that are allocated to the incident; and</li> <li>Provision of management support services</li> </ul> </li> </ul>

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 44 of 3

Document Owner: D. Roberts Document Approver: D. Roberts



Role	Scope of Function					
Operations	<ul> <li>The scope of the operations function includes:</li> <li>Management of all activities that are undertaken directly to resolve the incident; and</li> <li>Management of all resources (people and equipment) assigned to the Operations Section.</li> <li>An Operations Officer may be appointed by the Incident Manager when an incident reaches such proportions that the Incident Manager is unable individually to fulfil the operations function and still effectively carry out other responsibilities. The Operations Officer is delegated responsibility by the Incident Manager to implement strategies to resolve the incident. The Operations Officer is responsible to the Incident Manager.</li> </ul>					
Logistics	The scope of the logistics function includes support for control of the incident through the obtaining and maintaining of:  • Human and physical resources;  • Facilities;  • Services; and  • Materials.  For some incidents the Incident Manager may deliver the logistics function. However, if considered necessary by the Incident Manager, a Logistics Officer may be appointed and be delegated to:  • Take responsibility for managing those resources allocated to the Logistics Section; and  • Manage those activities necessary to provide logistical support during the incident.  • The Logistics Officer is responsible to the Incident Manager.					

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Document Number: ERP-00001 Version Date: 25/10/2010 Per

Document Owner: D. Roberts Document Approver: D. Roberts Page: 45 of 3



Manage the Emergency

The Incident Manager shall manage the overall incident at both a strategic and operational level.

Operational tasks shall be delegated to the operational response team via the Incident Manager or members of the Incident Management Team.

In managing all aspects of the incident, support shall be provided by the Executive Leadership Team. The EGM or Manager, in close consultation with their teams, shall source and allocate the necessary resources, functional and specialist support that is requested by the Incident Manager in order to manage the incident at both an operational and strategic level.

An incident will often have secondary or unintentional consequences that can be as damaging as the incident itself. It is important that the Incident Manager and **all** Incident Team Members manage any consequences that arise both real and perceived. Mitigation measures for any identified consequences should be developed and implemented as part of managing the incident. Pro-active management can preempt secondary consequences, or if they do occur, can ensure they are managed effectively.

## Management of Incident

Incidents may range in impact severity but each is managed in a similar manner, with the principle being support to all levels of Seqwater that are involved in either the response or recovery phase.

When an incident is declared, the following actions are undertaken by the relevant Manager or appointed Incident Manager, as required (**Note**: some may already have been implemented under an *Alert* phase if it has been escalated to an incident):

- Declare the incident and apply an incident level
- Establish internal communications with relevant Segwater groups
- Open communications channels to key stakeholders
- Confirm key Incident Management Team appointments with Managers or Executive General Managers
- Notify relevant people that they have been identified to form part of the Incident Management Team.
- Assemble core team and identify required support elements
- Manage operational aspects of the incident together with incident consequences
- In consultation with the Corporate Stakeholder Relations Team manage the external aspects and stakeholders
- Implement recovery and restoration actions
- Terminate the Incident and move to post incident phase

The intent on declaring an incident is to manage the incident safely and to minimise the negative impacts on Seqwater in terms of:

- 1 Our Water Quality (Public Health)
- 2 Our People
- 3 Our Customers & Stakeholders
- 4 The Environment
- 5 Governance (Decision Making)
- 6 Our Water Quantity & Continuity of Supply
- 7 Our Assets
- 8 Our Reputation
- 9 Security (Physical and Natural Events)

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 46 of 3
Document Owner: D. Roberts Document Approver: D. Roberts



Incidents can occur at any time and the severity and impacts shall vary. It is therefore important that they are managed and responded to in an appropriate manner. An incident classified as a level 1 will not have the same response measures as a level 4 as the impacts of the incident and associated risks would be significantly lower. It is still important that the same process will be applied to the incident, irrespective of incident level applied.

Effective internal and external communication of incidents is vital. We have obligations under both the Seqwater Market rules and regulatory requirements to communicate to other Grid Participants , the Grid Manager (level 3, 4,& 5) and the Department of Environment and Resource Management of incidents. It is important to ensure regulatory / legislative reporting timeframes are strictly complied with.

## Major drinking water health-related emergencies

For major drinking water health-related emergencies, Queensland Health will take the Emergency Manager role. In this case, the Grid Manager will become the Emergency Coordinator and support Queensland Health on behalf of the water industry, including:

- providing senior representation on the Emergency Management Team
- providing or sourcing expertise for the Health Reference Panel, if necessary
- seconding staff to the Interagency Operations Team to act on the agreed strategy
- coordinating the Environmental Investigation with the relevant Grid Participants
- coordinating and reporting scientific investigations
- providing and coordinating logistics support as required
- giving full, proactive cooperation in general.

### Water Supply Emergency Declarations and Emergency Operating Instructions

A Water Supply Emergency can be declared by the responsible Minister. A water supply emergency is an event or situation where there is a demonstrably serious risk to being unable to meet part of the state's essential water supply needs. The following are examples of some potential situations included in the Water Act 2000:

- failure of a large part of water supply, treatment or distribution infrastructure
- extended severe drought conditions
- water storage used for essential water supply needs becoming unfit for use due to contamination.

An incident of such a magnitude to prompt the making of a Water Supply Emergency Declaration will likely be a level 4 or 5 under this Emergency response plan.

When a Water Supply Emergency has been declared, the Grid Manager may issue Emergency Operating Instructions.

### Manage external aspects and stakeholders

The Grid Manager in close consultation with Seqwater's Incident Management Team and Strategic Relations and Communications Team is responsible for ensuring the proper management of external aspects and stakeholders. These may include media and public information, other Grid Participants and state and federal government agencies.

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## Incident & Emergency Response Plan Scalability

It is important to note that this Incident & Emergency Response Plan is scalable and is dependent upon the actual incident being managed effectively.

The CEO and Executive General Managers are advised of all incidents and incident alerts as they are declared and provide input and advice as and when required. If the impact severity of an incident alert or a declared incident escalates to a level 4 and the Manager or Coordinator is required to attend to more operational aspects of the Incident, the management of the incident is to be passed to a Executive General Manager. An Executive General Manager shall manage all incidents declared as a level 4 or 5.

#### Escalation

The escalation of an incident through to Level 5 is based on a combination of factors including:

- the consequence of the incident to:
  - water quality
  - water assets
  - water quantity
  - security
  - public health
  - the environment
  - public confidence
- the ability of the deployed people and resources to manage the consequence.

The Incident Manager within Seqwater has the authority to escalate an incident to a higher level and send appropriate notification to the Grid Manager corresponding to the escalation. The Grid Manager reserves an overriding right to escalate emergencies.

Prompts for the escalation to a higher level include:

- actual or potential impact on the Water Grid, its Grid Customers, community and environment is more widespread
- the available people and resources associated with the original incident severity level are inadequate to manage the incident
- more information is known about the incident, justifying a reclassification
- an upward trending pattern of the initial incident (i.e. a domino effect), which may result in the escalation of the incident
- emergency services are required to assist
- water quality issues require notification to the Queensland Water Commission, Department of Environment and Resource Management and/or Queensland Health
- potential for secondary issues to develop and be more damaging than the original incident
- widespread attention by the media, regulators, or Members of Parliament
- potential for major asset damage or loss.

Incident Management Room

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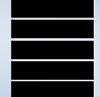
Segwater has established two fully resourced incident management rooms These rooms are located at 240 Margaret Street, Brisbane, which is the primary location, and the conference room at North Pine Water Treatment Plant (secondary location), located at the corner of Byrnes and Protheroe Road, Joyner. The Incident Manager decides whether to activate an Incident Management Room. Staff who have prior room bookings will be advised to relocate.

## On Call Arrangements

Segwater maintains an after-hours on-call roster for a number of positions as well as the control room at Mt Crosby being staffed 24 hours a day. The on-call positions ensure Segwater can adequately respond to and support after-hours incidents and other required business needs.

The On-Call roster is retained within Q-Pulse and maintained by the Principal Coordinator, Incident and Emergency Management. An email is generated on a weekly basis to the staff members who are rostered on-call for the following 7 days. This email is also sent to the ITC Team who arranges for the diversion of generic landline numbers to the rostered on-call person's mobile phone.

- 1. Duty Manager
- 2. WTP Supervisor Coordinator
- 3. Dam Supervisor Coordinator
- 4. Executive General Manager
- 5. Water Quality Product



In the case of incident situations occurring after hours, the rostered Duty Manager will assume the role of interim Incident Manager. This Incident Manager role may be transferred to another Seqwater staff member as the incident continues into normal operation and business hours.

The WTP Coordinator/Supervisor, the Dam Supervisor/Coordinator or the Water Quality Product Team Member shall inform the rostered on-call Duty Manager should an incident occur after hours. Major incidents and critical issues shall be elevated to the rostered on-call Executive General Manager as and when required. To support these on call arrangements, a list of other key Seqwater employees are provided as Attachment F.

#### Incident Costs

All costs associated with responding to a major incident are to be captured as part of the incident management process. These costs will include labour, materials and services that are associated with the incident and post incident activities. Upon declaration of the incident, the Incident Manager is to contact the Finance Team and request an allocation of a work order number for the incident. The work order number is to be communicated to all incident team members with a request to record all associated costs, including labour against the work order number. Upon incident closure the Incident Manager is to contact the Finance Team and request the work order to be closed.

### Communication

Effective communication plays a major part in successfully managing emergencies. All interested parties in the emergency response need to focus on providing and supporting communications which:

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- are timely
- are up to date
- are accurate
- include a caution or indication of confidence based on the completeness of the information available
- assist the overall emergency management effort
- create a single voice, to avoid confusion and conflicting messages
- maintain public and stakeholder confidence
- where possible, do not adversely affect insurance cover.

Any information advised to the Grid Emergency Management Team from Seqwater for use in briefing the Minister's Office must be authorised by the Seqwater CEO. Ultimately the Grid Manager is responsible for Ministerial Communications.

The Grid Emergency Management Team is responsible for managing all communications functions. Refer to 'Establish Command and Control' of this plan, for an outline of the emergency management role.

For an incident of any level where a state-owned Grid Participant briefs the Minister's office, the Informal Ministerial briefing template (Q-Pulse Ref-00021) should be used. This should be undertaken in consultation with the Grid Manager who would also receive a copy of the briefing note.

Seqwater acknowledges that the Grid Manager is in charge of communications through the Communications Coordination Team.

Table 11 and 12 below identifies the communication roles between Seqwater teams and those of the Grid Manager.

Document Number: ERP-00001 Version Date: 25/10/2010 Page: 50 of 3
Document Owner: D. Roberts Document Approver: D. Roberts



Among members of the Water Grid and Government stakeholders.

Table 11: 'Internal' communication roles

Level	Communication	Incident Management Team Seqwater	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other)
1–2	Notification	Notify internal key stakeholders as required, e.g. CEO, Board  Notify other impacted Grid Participant/s	No involvement	No involvement
	Stakeholder briefings	Manage internal stakeholders	No involvement	No involvement
	Liaison/support	Liaise with other impacted Grid Participant/s	No involvement	No involvement
Alert	Notification	Notify internal key stakeholders as required, e.g. CEO, Board  Notify other impacted Grid Participant/s.  Notify Water Grid Manager  Notify Office of the Water Supply Regulator, and other regulatory bodies if required	Water Grid Manager Duty Manager to notify Minister's office	Water Grid Manager Duty Manager to notify Minister's office
	Stakeholder briefings	Manage internal stakeholders	No involvement	No involvement
	Liaison/support	Liaise with other impacted Grid Participant/s	No involvement	No involvement

Version Date: 25/10/2010 Document Approver: D. Roberts



Level	Communication	Incident Management Team Seqwater	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other)
3–5	Notification	Notify Water Grid Manager  Notify Office of the Water Supply Regulator, if required  Notify internal key stakeholders as required, e.g. CEO, Board  Confirm with the Water Grid Manager which stakeholders have been notified	Notify other relevant stakeholders, as appropriate:  Water Grid Manager CEO Responsible Minister/s office Other Grid Participants Water Grid Manager Board Queensland Water Commission Department of Environment and Resource Management Queensland Health Premier's Department Emergency Services	
	Stakeholder briefings	Proactively provide information to Emergency Manager/Emergency Coordinator to enable preparation of briefings  Assist Emergency Manager Teams in preparation and approval of briefings.  Forward approved briefings to internal stakeholders as required, e.g. Grid Participant senior management, CEO, Board  Do not issue briefings independent of Emergency Manager/Emergency Coordinator	Proactively provide information to Emergency Manager to enable preparation of briefings  Assist Emergency Manager in preparation and approval of briefings  Forward approved briefings to internal stakeholders, as required  Do not issue briefings independent of Emergency Manager	Manage preparation and approval of briefings, as appropriate (including SITREPs)  Issue briefings  Respond to enquiries about briefings and other stakeholder enquiries  Unless another organisation takes the Emergency  Manager role, the Water Grid Manager's responsible  Minister has final approval of briefings, etc.
	Liaison/support	Proactively provide information and support to the Emergency Management Teams Provide SITREPs to summarise available information, as requested by the Emergency Manager/Emergency Coordinator	Proactively provide information and support to the Emergency Manager Coordinate liaison and communications support across the emergency response teams	Manage preparation and approval of briefings, as appropriate (including SITREPs)

Version Date: 25/10/2010 Document Approver: D. Roberts

Document Number: ERP-00001 Document Owner: D. Roberts



## External communication activities

Directed at the public and stakeholders outside Water Grid.

Table 12: 'External' communication roles

Level	Communication	Incident Management Team Seqwater	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other)
1–2	Strategy and messaging	Formulate any appropriate communications strategy messaging	Provide whole-of-Grid messaging, if required	No involvement
	Public face	Designate spokesperson	No involvement	No involvement
	Media management	Manage media at own discretion	Manage comments on the Water Grid, if required	No involvement
	Public information and enquiries	Respond to media/public enquiries		
	Citquiio	May only comment on the incident as it relates to Seqwater assets		
		No comment to be made on whole-of-Grid issues		
Alert	Strategy and messaging	Formulate any appropriate communications strategy messaging at own discretion	Provide whole-of-Grid messaging, if required	No involvement
	Public face	Designate spokesperson	No involvement	No involvement
	Media management	Manage media at own discretion	Manage comments on the Water Grid, if required	No involvement
	Public information and enquiries	Respond to media/public enquiries		
	Cityanio	May only comment on the incident as it relates to Seqwater assets		
		No comment to be made on whole-of-Grid issues		

# All SEQ Water Grid communication activities for the State-owned entities are coordinated through the SEQ Water Grid Communications Unit, including Levels 1, 2 and Alert level incidents.

Document Number: ERP-00001 Document Owner: D. Roberts

25/10/2010 Version Date: Document Approver: D. Roberts



Level	Communication	Incident Management Team Seqwater	Communications Coordination Team (Water Grid Manager) #	Emergency Management Team (Water Grid Manager or other) <sup>6</sup>
3–5	Strategy and messaging	Work with the Emergency Manager to develop the communications strategy for the emergency response, and key messages for inclusion across all communications	Work with the Emergency Manager to develop the communications strategy for the emergency response, and key messages for inclusion across all communications	Conduct risk assessment and incident verification  Manage development of a communications strategy for the emergency response, and key messages for all communications  Unless another organisation takes the Emergency Manager role, the Water Grid Manager's responsible Minister has final approval of messaging, etc.
	Public face	Support spokesperson, as requested  Do not present public face independent of Emergency Manager	Support spokesperson, as requested  Do not present public face independent of  Emergency Manager	Designate spokesperson
	Media management Public information Public enquiries	Assist Emergency Manager in preparation and approval of media releases and other public information  Disseminate finalised and approved media releases, and other public information  Forward media/public enquiries to Emergency Manager  Do not issue releases or information independent of Emergency Manager	Assist Emergency Manager in preparation and approval of media releases and other public information  Disseminate finalised and approved media releases, and other public information  Forward media/public enquiries to Emergency Manager  Do not issue releases or information independent of Emergency Manager	Manage preparation and approval of media releases and other public information, as appropriate  Issue media releases (initial statement and further releases as appropriate) and other public information (Grid Participant websites, call centres, etc.)  Respond to media/public enquiries  Unless another organisation takes the Emergency Manager role, the Water Grid Manager's responsible Minister has final approval of media statements, etc.

All SEQ Water Grid communication activities for the State-owned entities are coordinated through the SEQ Water Grid Communications Unit, including Levels 1, 2 and Alert level incidents.

Document Number: ERP-00001 Version Date: 25/10/2010
Document Owner: D. Roberts Document Approver: D. Roberts



## **Manage the Recovery**

Upon the incident being brought under control or at least stabilised, the Incident Manager is to establish and implement a recovery and restoration plan.

The plan is to be developed in close consultation with all members of the Incident Management Team. All proposed actions are to be documented within the incident team meeting minutes and clearly define who is responsible for the action and in what timeframe the action is to be completed by. The CEO and Executive Management Team are to be provided with updates on the progress of recovery and restoration actions agreed to.

## Manage Recovery

Recovery begins immediately once an incident has been contained. The focus is on maintaining continuity of operations whilst restoring the Water Grid to normal status and or supply to isolated systems. The Grid Manager's strategic Water Grid management function provides direction as to the approach to be applied.

### Segwater's Incident Manager

The Seqwater Incident Manager is responsible for managing the recovery of our assets or re-establishing systems and processes to their usual functionality in accordance with the Emergency Manager's agreed recovery objectives. The Seqwater Incident Manager is also responsible, in consultation with the CEO, for providing information and resources to the Emergency Management Team and Emergency Coordination Team in order to assist a Grid recovery effort.

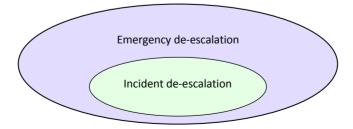
### Incident Close-out Report

For all Alerts, Level 3, 4 and 5 incidents, the impacted Grid Participant/s must complete the Incident Close-out Report provided at Attachment G, including the results of any investigation and rectification procedures performed, and copy to the Grid Manager (and Emergency Manager, if this is not the Grid Manager).

#### De-escalation

There are two elements of de-escalation in the emergency response context:

Figure 6: De-escalation



As shown, incident de-escalation is a sub-set of emergency de-escalation.



Incident de-escalation relates to incident management, and the status of the physical event. Seqwater is therefore responsible for incident de-escalation.

Emergency de-escalation takes into account a broader range of factors including emergency coordination and management, which may continue well after the incident that caused the emergency has be rectified. As such, it is possible that the emergency may stay ongoing after Seqwater has de-escalated its incident. Only the Emergency Manager can de-escalate the Water Grid emergency.

## Roles and responsibilities

Table 13: Roles and Responsibilities

Action	Seqwater Incident Management Team	Technical Coordination Team (Water Grid Manager)	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other) <sup>7</sup>
Agree recovery plan and objectives	•	•	•	•
Recover asset	•			
Issue Grid Instructions, as necessary		•		
Implement close-out communications protocols			•	•
Close-out incident	•			
Complete Incident Close-out Report	•			
Close-out emergency				•

## Emergency Coordination Team (Grid Manager)

The Emergency Coordination Team assists the Emergency Management Team in coordinating the Grid response process, based on recovery objectives and subsequent priority of work provided by the Emergency Management Team.

The Emergency Coordination Team must work with affected Grid Participants to determine the most effective method of implementing the recovery objectives. The Grid Manager will then issue Grid Instructions to Grid Participants, if required, in accordance with the recovery priorities and at a frequency which assists the recovery.

## Emergency Management Team (Grid Manager or other)

The Emergency Management Team is responsible for directing the whole-of-Grid recovery process. This is primarily achieved by outlining the recovery objectives and the subsequent priority of work.

This process may involve input and assistance from a number of other government departments and stakeholders such as:

- Queensland Treasury
- Department of Community Safety (Emergency Services)

ERP-00001

D Roberts

- Queensland Health
- Department of Employment, Economic Development and Innovation



- **Department of Premier and Cabinet**
- Department of Infrastructure and Planning
- **Grid Customers**

- Queensland Water Commission
- Department of Environment and Resource Management

### Communication and Media

The Emergency Management Team is responsible for managing recovery of communications across the Grid Participants and to external stakeholders and relevant parts of the Government. The Emergency Management Team is also responsible for issuing a close out statement/media release, if appropriate. The Emergency Management Team achieves this through the Communications Coordination Team.

### Close out report

Once the incident is brought under control, priority should be given to recovering lost functionality and to restoring normal services. The Incident Manager will terminate the incident and undertake a post incident debrief. The post incident review process is detailed within this plan. Complete form REF-00009 of the Water Grid Incident Notification Form and forward to the Grid Manager via the Principal Coordinator, Incident and **Emergency Management.** 

Document Number: Document Owner:

D Roberts

Version Date: 25/10/2010 Document Approver: D. Roberts



## **Improvement Actions**

The intent of the Post-Incident Review phase is to ensure lessons from an event are documented and actions that will prevent a recurrence or improve the response and recovery for similar events are completed. The review shall also assess the effectiveness of any incident or emergency related plans.

A post incident review will be initiated by the Incident Manager or either the Executive General Manager or Manager of the area the incident has impacted.

## Action required for a Post incident review

Upon the identification of the need to undertake a post incident review the following actions are to be undertaken, as required.

- Conduct formal or informal debrief of key participants and stakeholders
- Collate incident documents
- 3. Develop final reports
- Raise all identified actions and recommendations within Q-Pulse and allocate identified action officer

## Emergency Manager Debriefing

The Emergency Manager will decide if a formal debriefing process is to be carried out, based on the nature of the incident. The following table outlines responsibilities for carrying out debriefings following incident closeout.

**Table 14: Debriefing responsibilities** 

	Tools 2 is seen to the property of the propert				
Level	Seqwater Incident Manager	Emergency Manager			
411111111111111		(Water Grid Manager or other) 8			
1,2	Seqwater's Emergency Response Plan	No involvement			
and					
Alert					
3, 4	Carry out 'hot' debrief – informal debriefing which must occur as soon	Water Grid Manager to facilitate a 'cold' debrief including all entities			
and 5	as practicable following the event to capture immediate learning's and	involved in the emergency response in order to:			
	details	carry out a root cause analysis			
		capture and disseminate experiences and lessons learnt			
		throughout the incident			
		enable process improvements and modifications			

## Conduct debrief with key participants and stakeholders

Arrange for a gathering of key participants and identified stakeholder (including those external to Seqwater) to discuss the incident and management of such. An incident debrief gathering will ensure each participant provides their input and perceptions of what occurred and what led up to the incident, the actions taken and suggestions for the improved management of incidents. Debriefs should be formally conducted and the minutes recorded on FRM-00138. The meeting minutes are to include all actions, a responsible officer for the agreed action together with an expected close out date.

Document Number: Document Owner:



For levels 3, 4 & 5 Incidents a "hot debrief" is to be undertaken at the completion of the incident response to ensure we capture any immediate learnings and improvements.

## Participate in Levels 3, 4 & 5 Incident Debriefs facilitated by the Grid Manager

Grid Manager shall facilitate a 'cold' debriefing including all entities involved in the emergency response in order to:

- carry out a root cause analysis
- capture and disseminate experiences and lessons learnt throughout the incident
- enable process improvements and modifications

Debriefings will be fully documented, with copies of the minutes distributed to all entities involved. In the event that Seqwater is involved in the Grid Manager debrief, Seqwater will be required to bring copies of all documentation associated with the incident, such as notification forms, logs, SITREPs, briefings, media releases, correspondence, photographs etc. This information should be available within the incident file.

#### Collate incident documents

All documents that relate to each incident, the response and the recovery should be collated and filed together for future reference. Hard copy of all incident information is to be collated by the Incident Manager and forwarded to the Principal Coordinator, Incident and Emergency Management. Electronic copies of all incident documents are to be retained within Q-Pulse against the INIR number. Once the incident is finalised the Principal Coordinator, Incident and Emergency Management is responsible for ensuring the *Incident Folder* is transferred to the finalised incident folder on the g:\Projects\incidents

### WGM Post-emergency Report

The Post-emergency Report functions as a summary of information and feedback on an emergency and as a cover form for the file of associated documentation. It is a vehicle for information consolidation, analysis and formalised recommendations.

It should be completed by the Emergency Manager or Emergency Coordinator following a thorough debriefing process.

The Emergency Manager/Emergency Coordinator will distribute copies of the Post-emergency Report to all entities involved in the emergency response.

### Risk Register

Recommendations arising from the debriefing process and Post-emergency Report must be forwarded to Seqwater's Risk Manager for inclusion in the entity's Risk Registers, as appropriate.

Seqwater is responsible for incorporating recommended actions addressing its own assets and systems. The Grid Manager is responsible for incorporating recommendations which address:

- whole-of-Grid systems and continuous improvement
- learnings from the experience that have value for all Grid Participants, and should be shared with others not involved in the incident.



Following risk assessment in accordance with Seqwater's management procedures, recommendations and mitigations will flow through to update operational documentation such as:

- operational procedures
- training schedules
- water quality improvement plans
- · asset improvement plans.

## Develop the final post incident report

A final report should cover the incident from the time of first person aware until the incident is terminated. It is a key document for recommendations and actions arising from the event. The post incident report is to be documented on form FRM-00004 for levels 3,4 & 5 Incidents and FRM-00007 for level 1 and 2 incidents. Details of the post incident report are also to be included on the SEQ Water Grid Incident Notification Form REF-00008 and forwarded to the Grid Manager via the Principal Coordinator, Incident and Emergency Management.

For all reported water quality incidents where the regulator has been provided with a completed Part A of the Drinking Water Quality Incident Reporting Form, Part B of this form is also to be completed by the Water Quality Product Team and forwarded to the Department of Environment and Resource Management . The completed Part B form is to be scanned and retained within the incident folder.

## Raise all identified actions and recommendations within Q-Pulse

To ensure all agreed actions resulting from the post incident review are captured, they are to be recorded within Q-Pulse and action officers assigned. The utilisation of Q-Pulse ensures that all measures arising from an incident will be actioned even though the incident has been closed.

All actions assigned within Q-Pulse have completion dates set and emails are sent to the assigned action officer at periodic intervals if the action has not been completed. The Q-Pulse system also escalates outstanding actions to the action officer's immediate supervisor for review and to ensure follow up.

### Regular testing and review

At least once each year this Incident and Emergency Management Plan will be tested by the following key undertakings:

Table 15: Undertakings to Test Incident and Emergency Response Plan

Activities	Planned program
Undertake a review that enables a gap analysis between the Grid ERP	Seqwater's IERP rewritten in
and Seqwater's IERP	September 2010 to align with
	Grid ERP
Participating in at least one exercise with the Grid Manager and/or	Grid Wide exercise completed
Grid Participants, allowing incident classification assessment,	March 2010
notification procedures and communication protocols to be practiced	
	Further Grid Wide exercises
	scheduled March 2011
Ensuring members of the Emergency Coordination Teams and	Annual Training for key
Seqwater's Incident Management Teams understand their roles and	employees as listed in Table 17

Page: 60 of 3



responsibilities	
Ensuring the Emergency Coordination Teams and S Management Teams take part in any emergency m planning activities that are undertaken within the V	anagement

## Employee training

In addition to the Grid emergency exercise testing, key components of Seqwater's employee training program include regular arrangements to test the IERP using simulations and desktop exercises so that relevant personnel have an opportunity to practise communication and decision making under simulated incident situations. In general all employees will have awareness of the IERP, accordingly the current training program includes:

Table 16: Employee training program

rable 10. Employee training program	
Activities	Planned program
All new employees will be briefed as an integral part of their induction	New Employee induction
training on the content and operation of the Incident and Emergency Management Plan.	training completed monthly
Employees who are likely to have specific roles within Seqwater's Incident	Employee training plan
Management Teams will receive annual training covering theory and	includes annual training
practical application of the IERP.	sessions and testing of their
	understanding of Seqwater's
	IERP
Key employees will participate in the Grid Manager's training in relation to the Grid ERP.	Scheduled for March 2011
Key employees will participate in the Grid Manager's training in relation to the Grid Manager's Emergency Communication tool "OCA Incident Manager".	Scheduled for October 2010
All training records are to be kept and retained as part of a training	Pecards held in training
register.	Records held in training register
<b>*************************************</b>	

### **Broad Principles of employee training plan**

- Training will be provided for three specific groups of employees relating to their likely exposure to Incident Management.
  - Group 1 New employees. Training will be provided as part of the employee induction program and cover awareness, use and general operation of the IERP.
  - Group 2 Non Operational Employees. Include employees who are unlikely to be involved in incidents however will be provided with a generic overview of content and processes with little or no test of understanding at completion of the training program
  - Group 3 Operational Employees. Including mostly operational and field staff who are most likely to be involved in an incident. A detailed presentation and thorough testing of their understanding of Seqwater's IERP will be undertaken.

Document Number: ERP-00001 Document Owner: D. Roberts



- Testing processes will include written tests of an individual's understanding of the IERP. Practical testing will be undertaken so that all employees are included in a practical exercise at least annually
- Training plans have previously been developed although they will be re-evaluated as part of each year's annual review of this document.

### **Training Program**

**Table 17: Training Program** 

Training Type	Scheduled dates
Induction Training	Held the first week of every month
Employee Training Session 1 (Operational	November 2010
Employees)	
Employee Training Session 2 (Operational	November 2010
Employees)	
Major Internal Exercise testing and debrief	December 2010
Audit of regional WTP and Dam sites	February 2011
IERP Minor exercise test – Lake McDonald	March 2011
Assumed Major WGM exercise test	March 2011
Employee Training Session 2 (Non Operational	June 2011
Employees)	
IERP Minor exercise test – Mt Crosby	June 2011
IERP Minor exercise Test – Landers Shute	September 2011
IERP Minor exercise test – Molendinar	December 2011

#### Audit

Audits will be an integral part of the training plan to ensure employees are adopting the appropriate documentation and handbooks and that necessary material are easily accessible for practicable incident response. Field audits will be undertaken at least annually.

### **Checklists**

Checklists are available on Q-Pulse and have been designed to assist key personnel and support personnel meet their responsibilities in relation to an incident or an incident alert.

It is important to note that it would be most unlikely that all of the checklists detailed in this plan would need to be used or referred to when personnel are involved in minor type incidents and incident alerts. These checklists are provided as a ready reckoner / memory aide for various roles that maybe required to respond to a specific alert or incident situation. The designated Incident Manager will determine which roles are required as part of the incident and these checklists can be referred to in order to provide guidance.

Safety - Initial Safety Checklist - FRM-00185

### **Key Personnel**

First Person Aware - FRM-00186

Operations Coordinator / Site Supervisor – FRM-00187

Incident Manager – FRM-00188

Initial Incident Situation Report - FRM-00189

### **Functional Support Staff**

Chief Executive Officer - FRM-00190

Executive General Manager - FRM-00192

Principal Coordinator, Incident and Emergency Management – FRM-00193

Public Affairs and Media Manager - FRM-00194

Communications Officer - FRM-00195

Planning Officer - FRM-00196

Operations Officer - FRM-00197



Logistics Officer – FRM-00198

Document Number: Document Owner:



## **Attachment A: Related Plans**

#### **Emergency Response Document List**

<b>Emergency</b>	<b>Action</b>	Plans for	r Water	Quality
------------------	---------------	-----------	---------	---------

<ul> <li>Somerset,</li> </ul>
-------------------------------

- Wivenhoe,
- North Pine,

- Mid Brisbane,
- North Stradbroke Island (draft); and
- Generic.

## **Dam (Infrastructure) Emergency Action Plans**

- Atkinson Dam Emergency Action Plan;
- Baroon Pocket Dam Emergency Action Plan
- Bill Gunn Dam Emergency Action Plan;
- Borumba Dam Emergency Action Plan;
- Bromelton Emergency Action Plan;
- Cedar Pocket Emergency Action Plan;
- Clarendon Dam Emergency Action Plan;
- Cooloolabin Emergency Action Plan;
- Enoggera Emergency Action Plan;
- Ewen Maddock Emergency Action Plan;
- Gold Creek Emergency Action Plan;
- Hinze Dam Emergency Action Plan

- Lake MacDonald Emergency Action Plan;
- Lake Manchester Emergency Action Plan;
- Leslie Harrison Emergency Action Plan;
- Little Nerang Emergency Action Plan;
- Maroon Dam Emergency Action Plan;
- Moogerah Dam Emergency Action Plan;
- North Pine Dam Emergency Action Plan;
- Poona Dam Emergency Action Plan;
- Sideling Creek Dam Emergency Action Plan;
- Somerset Dam Emergency Action Plan;
- Wappa Dam Emergency Action Plan;
- Wivenhoe Dam Emergency Action Plan; and
- draft Nindoowinbah Dam Emergency Action Plan.

### **Existing HACCP Plans**

- Mt Crosby East Bank WTP HACCP Plan;
- Mt Crosby West Bank WTP HACCP Plan;
- North Pine WTP HACCP Plan;
- Molendinar WTP HACCP Plan;

- Hinze Dam PP WTP HACCP Plan;
- Forest Lake WTP HACCP Plan;
- Algester WTP HACCP Plan;
- Chandler WTP HACCP Plan;

Document Number: E

ERP-00001 D. Roberts Version Date: 25/10/2010 Document Approver: D. Roberts



Mudgeeraba WTP HACCP Plan;

- Runcorn WTP HACCP Plan; and
- Sunnybank WTP HACCP Plan.

### **Interim HACCP Plans**

- Caboolture WTP HACCP Plan;
- Landers Shute WTP HACCP Plan;
- Image Flat WTP HACCP Plan;
- Lake MacDonald (Noosa) WTP-HACCP Plan;
- Woodford WTP HACCP Plan;
- South Maclean WTP HACCP Plan;
- Capalaba WTP HACCP Plan;

- North Stradbroke Bores WTP HACCP Plan;
- North Stradbroke Herring WTP HACCP Plan;
- Enogerra WTP HACCP Plan;
- Petrie WTP HACCP Plan;
- Esk WTP HACCP Plan; and
- Lowood WTP HACCP Plan.

### **Miscellaneous Documentation**

Incident Management Handbook Responsibility LEG-00053

Corporate – Drinking Water Quality – Incident Reporting to OWSR – PRO-00707

Corporate - ERP On-Call Arrangements - REG-00001

Document Number: Document Owner:

ERP-00001 Version Date: 25/10/2010
D. Roberts Document Approver: D. Roberts



## Attachment B: SEO Water Grid Emergency Response Action Checklist

Step		Have you	Ø
A	Identify and	Established that the incident can be classed as an emergency?	
U	assess	<ul> <li>Assessed the incident's initial severity classification level using the descriptions and examples as detailed in section 18 this plan.</li> <li>Considered potential risks arising as the emergency situation progresses?</li> </ul>	
	Notify	Notified the Grid Participant internal emergency contact?	
<b>2</b>	·····,	<ul> <li>Phoned to notify the Water Grid Manager Duty Manager if it is a level Alert, 3, 4 or 5 emergency?</li> <li>Emailed the Water Grid Manager Duty Manager a completed Incident notification form (REF-00008)?</li> <li>Sent the Office of the Water Supply Regulator a completed Drinking water quality: incident reporting form, Part A, if applicable (copy to Water Grid Manager Duty Manager)?</li> </ul>	
		Notified the relevant key stakeholders?	
	Foto blick	Opened an Incident log?      Makiliand on Incident Management Town?	
3	Establish command	Mobilised an Incident Management Team?  In consultation with the Crid Manager, mobilised the Water Crid Manager's Emergency.	
	and control	<ul> <li>In consultation with the Grid Manager, mobilised the Water Grid Manager's Emergency</li> <li>Coordination Team and incident room?</li> </ul>	
		In consultation with the Grid Manager, determined the 'lead agency' and mobilised its	
		emergency command structure and Interagency Operations Team (Queensland Health	
		or Emergency Services)?	
		Activated the SEQWGERP?	
		Begin the process of continuous risk reassessment, drawing on specialised expertise as	
	Manage the	appropriate?  • Verified the incident level?	
4	emergency	Continually reassessed risk, command and control, and interagency communications?	<u></u>
		Implemented incident response arrangement at the asset/site level?	
		Established effective liaison among all interested parties in the emergency response,	
		and with key stakeholders?	
		<ul> <li>Used the Water Grid Manager to coordinate additional resources from other Grid</li> <li>Participants?</li> </ul>	
		<ul> <li>For major health-related incidents, committed support to the Queensland Health Emergency Coordination Team?</li> </ul>	
		Briefed relevant key stakeholders and established a schedule for ongoing updates?	
		Issued an approved holding statement to the media?	
		Developed a communication strategy and key messages for this incident?	
		Established who will be the public face/spokesperson for the response?      Developed further media statements as appropriate?	
		Developed further media statements as appropriate?      Developed and discominated public information releases, a.g. for publication via Grid.	
		<ul> <li>Developed and disseminated public information releases, e.g. for publication via Grid</li> <li>Participant websites and call centres?</li> </ul>	
	Manage the	Established the recovery objectives?	
<b>5</b>	recovery	Recovered the asset?	
	,	Issued an approved close-out statement to the media, if appropriate?	<u></u>
	•	• issued an approved close-out statement to the media, if appropriate?	

ERP-00001

D. Roberts



Step		Have you	Ø
<b></b>		<ul> <li>Completed an Incident close-out report and copied it to the Water Grid Manager?</li> </ul>	
		Submitted Part B of the Office of the Water Supply Regulator form 'Drinking water	
		quality: incident reporting'?	
6	Improvement	Carried out a 'hot' debrief?	
	actions	Carried out a 'cold' debrief (REF-00006)	
		Completed a Post-emergency report? (REF-00020)	
		Forwarded recommendations for inclusion in risk registers?	

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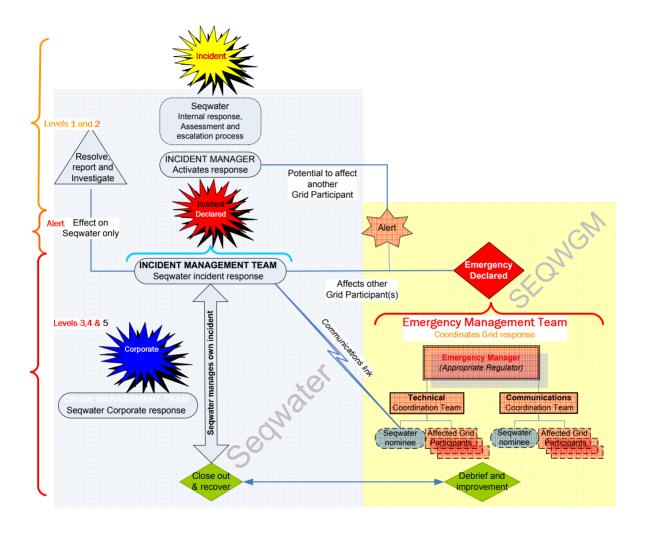
**Attachment C: Emergency Management Team structure** 

indicative structure. Depending on the emergency situation

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#### **Attachment D: Incident Response Process**



ERP-00001

D. Roberts



#### Attachment E: Chlorine and monochloramine level exemptions

In accordance with the Office of the Water Supply Regulator advice, levels of chlorine and monochloramines that exceed *Australian Drinking Water Guidelines (2004*) health values are not reportable as incidents under this Plan, provided the following conditions are met:

- The exemption only applies to incident reporting for chlorine or monochloramine levels above the Australian Drinking Water Guidelines (2004) found in the water treatment or transmission system, where as an operational practice, dosing of chlorine or monochloramine levels higher than the Australian Drinking Water Guidelines (2004) health value is required to achieve adequate disinfection in the reticulation system.
- The exemption only applies when there is a monitoring point prior to the delivery of water to customers to demonstrate the disinfection values are within *Australian Drinking Water Guidelines (2004*) health value guidelines.
- Where water is supplied from a transmission system owned by one Drinking Water Service Provider to a
  reticulation system owned by another provider, the owner of the reticulation system must be aware of the
  practice.
- Drinking water service providers must continue to report on chlorine or monochloramine levels above the *Australian Drinking Water Guidelines (2004)* in a reticulation system.
- The Office of the Water Supply Regulator recommends that all providers who choose to dose chlorine or monochloramine at levels higher than the *Australian Drinking Water Guidelines (2004)* health values in order to achieve adequate disinfection in the reticulation system consider the risks of disinfection byproducts being formed and include these in their regular monitoring program, if appropriate.

#### Refer to the following correspondence:

- Uwins, Heather (Office of the Water Supply Regulator)
   16 June 2009, letter to Andrew Moir (LinkWater),
   'Re: Incident reporting: monochloramine levels in transmission systems'.
- Hortz, Michael (LinkWater) 22 June 2009, letter to SEQ Water Grid Manager.
- Dennien, Barry (SEQ Water Grid Manager) 26 June 2009, letter to Michael Hortz (LinkWater).



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### **Attachment F: SEQ Key Internal Contacts**

Duty Manager  WTP Supervisor Coordinator  Dam Supervisor Coordinator  Deparations Coordinator  Manager Instruction Manager  Deparations Coordinator  Deparations Coordinator  Deparations Coordinator  Deparations Coordinator  Deparations Coordinator  Deparations Coordinator  Deparati	POSITION	CONTACT	WORK HOURS	MOBILE
WTP Supervisor Coordinator  Darn Supervisor  Executive General Manager  Water Quality Product  Chief Executive General Manager - Asset Delivery  Alex Fisher  Executive General Manager - Mater Delivery  Blindrew  Fincipal Strategic Asset Maintenance Engineer  Mick Drews  Principal Strategic Asset Maintenance Engineer  Mick Drews  Central Operations Manager  Brett Myatt  Central Technical Officer  Dano Kufeji  Danothan Creamer  Loanton Asset Maintenance Engineer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Costral Technical Officer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Costral Technical Officer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Costral Technical Officer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Danothan Creamer  Costral Technical Officer  Danothan Creamer  Danothan Cream				
Dam Supervisor  Executive General Manager  Water Capality Product  Chief Executive Officer  Executive General Manager - Asset Delivery  Executive General Manager - Mater Deliver  Executive General Manager - Organisational Development  Bill Andrew  Executive General Manager  Bill Andrew  Executive General Manager - Organisational Development  Bill Andrew  Executive General Manager  Bill Andrew  Executive Ge	· · · ·			
Executive General Manager Asset Delivery  Alex Fisher  Executive Officer  Deter Borrows  Alex Fisher  Alex Fisher  Alex Fisher  Alex Fisher  Alex Fisher  Becutive General Manager – Asset Delivery  Alex Fisher  Becutive General Manager – Water Deliver  Becutive General Manager – Water Deliver  Becutive General Manager – Organisational Development  Bill Andrew  Becutive General Manager – Organisational Development  Bill Andrew  British Strategic Asset Maliterance Engineer  Mick Drews  British Myatt  Central Operations Manager  Brett Myatt  British Myatt  Br	<u> </u>			
Water Quality Product Chief Executive Officer Peter Borrows Alex Faher Executive General Manager – Asset Delivery Alex Faher Executive General Manager – Business Services Helen Moore Executive General Manager — Business Services Helen Moore Executive General Manager — Organisational Development Bill Andrew Executive General Manager — Organisational Development Executive General Manager — Organisations General Manager — Organisations General Manager — Organisations General Development — Organisation	<u> </u>			
Chief Executive Officer  Executive General Manager - Asset Delivery  Alex Fisher  Executive General Manager - Water Deliver  Executive General Manager - Organisational Development  Bill Andrew  Executive General Manager - Water Deliver  Executive General Manager - Organisational Development  Bill Andrew  Executive General Manager - Water Deliver  Executive General Manager - Water Deliver Condition  Manager Strategic	-			
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Operations Supervisor  Principal Control Systems Engineer  Principal Coordinator, Incident and Emergency Management  Principal Risk Advisor  David Roberts  Peter White  Service Delivery Coordinator  District Coordinator  Manager Strategic Maintenance  Operations Coordinator  Mater Quality & Process Specialist Central	Operations Coordinator	Bob Hasemann		
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Principal Coordinator, Incident and Emergency Management  Principal Risk Advisor  Jeff Lyddon  Manager Business Capability  Peter White  Service Delivery Coordinator  Carl Roberts  District Coordinator  Peter Myatt  Manager Strategic Maintenance  Peter Pennell  Operations Coordinator  Mal Wright  Water Quality & Process Specialist Central	Operations Supervisor	John Granzien		
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Service Delivery Coordinator  Carl Roberts  District Coordinator  Peter Myatt  Manager Strategic Maintenance  Peter Pennell  Operations Coordinator  Mal Wright  Water Quality & Process Specialist Central  Rob Townsley	Principal Risk Advisor	Jeff Lyddon		
District Coordinator  Peter Myatt  Manager Strategic Maintenance  Peter Pennell  Operations Coordinator  Mal Wright  Water Quality & Process Specialist Central  Rob Townsley	Manager Business Capability	Peter White		
Manager Strategic Maintenance Peter Pennell Description of Mal Wright Mal Wright Mater Quality & Process Specialist Central Rob Townsley	Service Delivery Coordinator	Carl Roberts		
Operations Coordinator  Mal Wright  Water Quality & Process Specialist Central  Rob Townsley	District Coordinator	Peter Myatt		
Water Quality & Process Specialist Central Rob Townsley	Manager Strategic Maintenance	Peter Pennell		
	Operations Coordinator	Mal Wright		
Water Quality Product Manager Arran Canning	Water Quality & Process Specialist Central	Rob Townsley		
	Water Quality Product Manager	Arran Canning		

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# **Attachment G: Incident Close-out Report** Incident Close-out Report: standard format

To be completed and forw	varded to the SEQ Water G	rid Manager via ema	il: <u>notifica</u>	ations@	
Incident number	2010-xxx				
Reporting organisation				•	
Actions taken					
Action				Completion date	
Actions requiring fol	llow-up				
Action		Assigned to		Completion date	
Verification and clos	sure				
1. I am satisfied the acti	ons taken have been effect			od and severity of the	e issues
I am satisfied the action recurring and to effect	ons taken have been effect t improvement, and that th	ne incident can be clo	sed-out.		
I am satisfied the action recurring and to effect	ons taken have been effect It improvement, and that the ave been advised of the cort	ne incident can be clo	sed-out.		
<ol> <li>I am satisfied the active recurring and to effect</li> <li>All relevant parties has</li> </ol>	ons taken have been effect It improvement, and that the ave been advised of the cort	ne incident can be clo	sed-out.		
<ol> <li>I am satisfied the activate recurring and to effect</li> <li>All relevant parties have relation to this incide</li> </ol>	ons taken have been effect It improvement, and that the live been advised of the cor Int.	ne incident can be clo	osed-out. actions to		
<ol> <li>I am satisfied the activate recurring and to effect</li> <li>All relevant parties have relation to this incided</li> </ol> Name	ons taken have been effect It improvement, and that the live been advised of the cor Int.	ne incident can be clo	osed-out. actions to		

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#### Attachment H: Emergency External Contact List -

Entity	Contact person	y External Contact Li	Contact details
SEQ Water Grid Manager	Barry Dennien	Chief Executive Officer	
	Scott Denner	Director, Risk & Technology	
	Dan Spiller	Director, Operations	
	Brett Spink	Risk Program Manager	
	Lee Hutchison	Risk and Emergency Manager	
	Media Duty Manager		
<u> </u>	Duty Manager		
LinkWater	Duty General Manager		
	Andrew Moir	Services	
		Corporate Communications Manager	
	Call Centre		
WaterSecure	Keith Davies	CEO	

ERP-00001

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	Paul Rees	Manager Communications and	
		External Relations	
	Matt Service	Operations Manager Purified	
		Recycled Water	
	Sean McCagh	Operations Manager Desal	
	Call Centre	Western Corridor Recycled Water	
	Call Centre	Gold Coast Desalination Plant	
Unity Water			<u> </u>
Unity Water			
	Graeme Arthy	Principal Engineer Network Control	
Moreton Bay Regional Council			
Area)			
	Robert Stringfellow	Senior Manager Network Operations	š.
	Barry Holcroft	Executive Manager Operations South	
Northern Region	Duty Shift Officer	Network Operations Control Room	
(Sunshine Coast Regional Council		(North)	
Regional Council Area)		(secondary point of contact for	
		incidents)	
	Michael Doherty	Network Operations Manager	
	Peter Willey	Manager Operations	
	-	_	



		<u>-</u>	
Entity	Contact person	Role	Contact details
	Gary Sabburg	Executive Manager Operations North	
Head Quarters	Call Centre	Customer Service Team	
	Helen Mohr	Manager Communications &	
		Marketing	
	Dave Archbold	Coordinator Business Resilience	
	Martin Doré	Manager Business Sustainability	
	Jon Black	^E^	
	JOH DIACK	OLO	
	Peter Scott	CFO & Dep. CEO	
Queensland	Urban Utilities		
Queensland Urban	West Duty Officer	West Control Room (secondary point	
Utilities (QUU)	·	of contact for incidents)	
	Media Duty Manager	24/7 Communications and Media Duty Officer	
	Manager - Source Control & Product Quality	Water quality contact	
	a i roddol gddiny		Business hours
	Robin Lewis	C00	
	Noel Faulkner	CEO	



Entity	Contact person	Role	Contact details					
	Email contact for East QUU incident Management room (when activated)							
	quusde-incidentroom@							
		Email contact for West QUU incident Management room (when activated)						
	<u>quu.west.imt@</u>							
		QUU Emergency Management room (wh	en activated)					
	QUU.EMT@							
	THESE EMAILS ARE C ACTIVATED	ONLY MONITORED WHEN AN INCIDEN	NT OR EMERGENCY HAS BEEN DECLARED AND THE ROOM/S					
Allconnex Wa	ater							
Gold Coast District	Duty Manager	On-call Incident Manager						
	Duty Operator	24hr Call Centre						
		(secondary point of contact for incidents)						
	Dick Went	District Manager						
Logan District	Duty Operator	24hr Call Centre						
	Daryl Ross	District Manager						
	Palith Siriwardana	Operations Manager						
Redland District	Gary Soutar	District Manager						
	Brad Taylor	Manager Treatment Operations						



Contact person	Role	Contact details
Kevin McGuire	Manager Reticulations Operations	
Sherryn Filip	Customer Relations Officer	
	(for communications/ media)	

Document Number: Document Owner:

Page: 78 of 3



Other key stakeholder contacts

Entity	Contact person	Role	Contact details
Emergency Services	S		
Police, Ambulance,	Fire - 000		
Emergency Management Queensland	State Disaster Coordination Centre	Watch Desk Officer	
Queensland Fire and Rescue Service	Head Office  Media Liaison		
	iviedia Liaisori		
Chemical Hazards and Emergency Management (CHEM)			
Queensland Police Service	Head Office		
Service	Counter Terrorism Coordination Unit		
	Water Police		
	Media and Public Affairs Branch		
Queensland Govern	iment		i
Ministers' offices  Do not contact Miniother Ministers as n		an that of the Minister for Natural F	Resources, Mines and Energy—who will contact the Premier and
	Lance McCallum	Principal Advisor	
	David Robertson	Media Advisor	
	Tim Watts	Policy Advisor	

Page: 79 of 3

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Entity	Contact person	Role	Contact details
Departments	<u> </u>		
Department of Environment and Resource Management	Debbie Best	Office of the Deputy Director-General Water and Catchment Services	
	Greg Oliver	General Manager, Urban Water	
	Kerry Waters	General Manager, Client Communications and Information	
	Drinking Water Incidents	Office of Water Supply Regulator	
	Recycled Water Incidents	Office of Water Supply Regulator	
	Peter Allen	Office of Water Supply Regulator Director, Dam Safety	
	EPA Hotline	Environmental Protection Agency (for reporting wildlife emergencies and pollution incidents)	(24hrs)
Queensland Water Commission	Karen Waldman	Executive Director	
Queensland Police Service Counter Terrorism Strategic Policy Branch	Peter Hallinan (Stakeholder Engagement)		
Queensland Police Service Security Planning and Coordination	Adrian Pate	Principal Policy and Programs Officer	



Entity	Contact person	Role	Contact details
Queensland Police Service Security Intelligence Branch			
Treasury	Ken Sedgwick	Assistant Under Treasurer	
	Kellie Reeves	Treasury Advisor	
Queensland Health	Dr Greg Jackson	Water Quality Unit Environmental Health Branch Health Protection Directorate	
	Water Quality Unit Emergency Contact Forensic and Scientific Services	(Analytical support, water-related health problems)	
Department of Employment, Economic Development and Innovation	WHS Inspector and Workplace Accident Notification	Workplace Health and Safety	(24hrs)
Department of Transport and Main Roads	Steve Hallam	Transport Senior Advisor, Emergency Management	
	Brian Balwin	Main Roads Senior Advisor, Critical Incident Coordination	



Grid Customers			
		<u>.</u>	9-
CS Energy	David Christy	Coal and Water Resources Manager	
	Swanbank Power Station Shift Supervisor		
	Steve Watterston	Swanbank Power Station Operations Superintendent	
Tarong Energy	Dave Barram	Acting Manager Operations	
Corporation	Dave Ballalli	Acting Manager Operations	
	Jay Merritt	Senior Communications Advisor	
	Tim Loth	Community Relations Manager	
Toowoomba Regional Council	Kevin Flanagan	Director Water Services	
	Alan Kleinschmidt	Manager Water Operations	
	.i	i	



#### **Attachment I: Grid Participant Emergency Response Plan approval requirements**

These approval requirements will be used by the Water Grid Manager to ensure Grid Participants' internal Emergency Response Plans are consistent with and meet the objectives of the SEQWGERP. When submitting plans for approval, Grid Participants are to include this table with a note giving the page/s of the plans on which each requirement is met.

Market Rules reference	To be Components		e included in Grid Participant emergency response plans	
		Recommendations (best practice)	Requirements (compulsory)	Plan
4.30 (a) (i)  [provide] 'comments regarding the extent (if any) to which the draft Grid Service Provider Emergency Response Plan or Distribution Service Provider Emergency Response Plan is inconsistent with, or does not reasonably meet the objectives of the SEQWGERP'.	General  Governance and policy	To facilitate effective interaction during an emergency, Grid Participant emergency response plans should mirror the six-step process detailed in the SEQWGERP.	<ul> <li>A Testing and Review Plan aligned with that detailed on page 7</li> </ul>	22-59 57
OLQWOLIN .			<ul> <li>of the SEQWGERP is to be included.</li> <li>A Training Plan aligned with that detailed on page 8 of the SEQWGERP is to be included.</li> <li>The general responsibilities of Grid Participants detailed on page 14 of the SEQWGERP are to be included.</li> </ul>	58 13
	Identify and assess incident severity		<ul> <li>Table 3 (Incident severity classification levels) is to be reproduced verbatim.</li> <li>The trigger levels contained within  must be reproduced, with Grid Participant information for action on Level 1, 2 and Alert incidents included as appropriate.</li> </ul>	25 25

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Market Rules reference	Components	To be included in Grid Participant emergency response plans		Pg/s in
market Rules reference	Components	Recommendations (best practice)	Requirements (compulsory)	Plan
	2 Notify		<ul> <li>Table 4 (Notification responsibilities) is to be reproduced with the Grid Participant emergency contacts substituted as appropriate.</li> <li>Contact details for the Water Grid Manager Duty Manager and Media Duty Manager to be reproduced within the body of the Plan in the section on notifications as well as in the contacts list in the annexes to the Plan.</li> </ul>	33 32/33 Anex. H
			<ul> <li>A key stakeholder notification table, similar to Table 5 (Key stakeholder notification) but specific to the Grid Participant is to be included.</li> </ul>	36
			<ul> <li>The Plan is to specify that records are to be kept in accordance with the instruction on record keeping in <sup>2</sup>.</li> </ul>	31
	Stablish command and control		<ul> <li>Table 7 (Command and control function responsibilities) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>	15/16
			<ul> <li>Figure 3 (Emergency Response Team structure) is to be reproduced with Grid Participant details substituted as appropriate.</li> </ul>	37
			<ul> <li>Table 9 (Function teams membership) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>	18
			A description of the structure, role and management of the Incident Management Team, the Interagency Operations Team and the Emergency Management Team are to be included and aligned with the detail in	18
			<ul> <li>Table 11 (Normal emergency response function team locations) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>	20
			<ul> <li>The Plan is to include the continuous reassessment process in</li> <li>.</li> </ul>	21
			• The Plan is to include the escalation process in $oldsymbol{oldsymbol{arepsilon}}$ .	45

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Market Rules reference	Components	To be included in Grid Participant emergency response plans		Pg/s in
market Nation Fold Cities	Components	Recommendations (best practice)	Requirements (compulsory)	Plan
	Manage the emergency		<ul> <li>The Plan is to note that incident management is carried out by the Grid Participant.</li> <li>The Plan is to note the emergency coordination functions carried out by the Water Grid Manager as detailed in <a>3</a>.</li> <li>Table 12 ('Internal' communication roles) is to be reproduced</li> </ul>	13 13
			<ul> <li>with Grid Participant details inserted as appropriate.</li> <li>Table 13 ('External' communication roles) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>	48 50
	S Manage the recovery		<ul> <li>Incident de-escalation and emergency de-escalation are to be included in the Plan as detailed in 5.</li> <li>The requirement for an Incident Close-out Report as detailed in 5 is to be included in the Plan.</li> <li>The role of the Emergency Management Team in managing the recovery as detailed in 5 is to be included in the Plan.</li> </ul>	52 54 53
	6 Improvement actions	<u> </u>	<ul> <li>Table 14 (Debriefing responsibilities) is to be reproduced with Grid Participant details inserted as appropriate.</li> <li>Post-emergency Report and Risk Register actions as detailed in G are to be included in the Plan.</li> </ul>	55 56
4.29 (d)  [for Distribution Service Providers] 'in the case of Water Supply Works constituting Isolated Supply Schemes, contingencies for securing alternate water supply'.			All isolated supply schemes are to be identified in an annex to the Plan, with a suitable contingency plan for the provision of an alternate water supply detailed for each.	Not applicable

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SEQ Water Grid

# Emergency Response Plan version 2.1

Whole-of-Grid response



### Activate Emergency Response Plan

To activate this Plan, in the event of an Alert or Level 3–5 incident, notify the SEQ Water Grid Manager Duty Manager

**NOTIFY BY BOTH** Phone:

Email: emergency

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# Contents

Document control	
Version control	4
Approval	4
Distribution	4
About this Plan	5
How to use this Plan	
Purpose	
Background	
Objectives	
Emergency Response Plan implementation and sustainability	
Regular testing and review	
Training	
Internal understanding and document control	
Amendment	
Acknowledgements	
Definitions and terms	
Policy	
Definition of 'emergency' for this Plan	
Link to SEQ Water Grid Risk Management Framework	
Emergency Response Plan priorities	
Critical infrastructure	14
General roles and responsibilities	
Emergency response hierarchy	14
Emergency response functions	15
All Grid Participants	15
Water Grid Manager	16
SEQ Water Grid Communications Unit	16
Quick guide to emergency response	1 <b>7</b>
Identify and assess incident severity	
Is it an emergency?	
What is its level of severity?	
Ålert level	18
Notify	26
Notification responsibilities	26
Grid Participant emergency contact	26
Water Grid Manager Duty Manager	
Office of the Water Supply Regulator	
Notify other key stakeholders	28
Record keeping – Emergency Response Log	29
Establish command and control	żo
Defining incident to a magazine	
Defining incident vs emergency	
Communical and control functions	
Function ownership	
Emergency Response Team structure	
Function teams membership.	
Incident Management Team	
Technical Coordination Team.	
Communications Cooksination Team	

Emergency Management Team	
Interagency Operations Team	
Location	•
Continuous reassessment	
Escalation	37
Manage the emergency	
Incident management	
Emergency coordination	
Liaison and resource sharing	
Major drinking water health-related emergencies Whole-of-Grid operations	
Communication	
Overview	
'Internal' communication activities	
'External' communication activities	
Manage the recovery	ДЯ
Context	
De-escalation	
Roles and responsibilities	49
Incident Manager (Grid Participant/s)	
Emergency Coordination Teams (Water Grid Manager)	
Emergency Management Team (Water Grid Manager or other)	50
• Improvement actions	
Debriefing	
Post-emergency Report	
Risk Register	
Attachment A: Emergency contact list	
Grid Participant – first priority contacts	
Grid Participant – additional contacts Other key stakeholder contacts	
•	
Attachment B: Emergency response outline roadmap	
Attachment C: Communication workflow	65
Attachment D: Grid Participant Emergency Response Plan approval requirements	66
Attachment E: E. coli Alert escalation process	
Attachment F: Chlorine and monochloramine level exemptions	
Attachment G: Incident Notification Form	
Attachment H: Sample Situation Report (SITREP) template	
Attachment I: Informal Ministerial briefing template	76
Attachment J: Incident Close-out Report	77
Attachment K: Debriefing minutes template	79
Attachment L. Post-emergency Report template	66
Attachment M: Emergency response action checklist	
Attachement N: Francescow Managerrent Team Structure	- 46

#### Document control

#### Version control

Date	Author	Change and/or action	Version
10.08	Sean Rhodes		1.0
09.09	Sharon McHugh	Revision of structure and content	Draft
11.09	Brett Spink	Interim copy prepared for release	Interim
03.10	Brett Spink	Annual review	2.0
05.10	Brett Spink	Exercise Matrix recommendations changes	2.0
07.10	Brett Spink	SEQ Water Grid Communications Unit changes	2.0
11.10	Lee Hutchison	Contact details updated in line with change to Attachment A	2.1

Please note: changes to Attachments A and D–N are not included in version control, but will include the date of issue (Refer to 'About this Plan – Amendment').

### Approval

Date	Approval received from	Version
10.08	The Hon. Craig Wallace MP, Minister for Natural Resources and Water	1.0
12.09	The Hon. Stephen Robertson MP, Minister for Natural Resources, Mines and Energy and Minister for Trade	Interim
09.10	The Hon. Stephen Robertson MP, Minister for Natural Resources, Mines and Energy and Minister for Trade	2.0
11.10	Chief Executive Officer (contact detail changes only)	2.1

#### Distribution

Copies of the SEQ Water Grid Emergency Response Plan will be issued electronically by the SEQ Water Grid Manager. Grid Participants uncertain of the currency of their copy of the SEQ Water Grid Emergency Response Plan are to contact the SEQ Water Grid Manager in order to obtain a current version.

### About this Plan



# How to use this Plan

This SEQ Water Grid Emergency Response Plan is structured to provide all Grid Participants with clear, step-by-step guidance in responding to SEQ Water Grid emergencies.

It is the overarching whole-of-Grid Emergency Response Plan, under which each Grid Participant will have its own internal Emergency Response Plan for more specific detail on incident management and asset recovery.

About this Plan Policy		The first two tabbed sections include general information about the Plan and Emergency Response Policy.
Quick guide to emergency response		This is a one-page summary of the key steps in emergency response.
0	Identify and assess incident severity	These numbered and colour-coded tabs form a user manual, with step-by-step information on 'who-what-when' for each stage of emergency response.
0	Notify	when for each stage of emergency response.
8	Establish command and control	
4	Manage the emergency	
<b>(3)</b>	Manage the recovery	
6	Improvement actions	

Throughout this Plan there are some useful tools to help you:

<b>(9)</b>	Snapshots	Located at the start of each section, these summarise the key steps at each stage of the emergency response process.
3	Tool/resource boxes	These refer you to additional information or resources elsewhere in this Plan, or in another document.
<b>9</b>	Action checklists	Located at the end of each section, these are an aid to ensure no actions are missed at each stage of the emergency response process.
Emerg roadn	ency response outline ap	Attachment B is a flowchart which illustrates the overall emergency response process.
<b>(3)</b>	Emergency response action checklist	Attachment M brings together all the action checklists to form a handy worksheet which can be used to track progress during emergency responses.

#### **Purpose**

This document describes the SEQ Water Grid Emergency Response Plan (Emergency Response Plan). The purpose of this Emergency Response Plan is to coordinate an effective response across the SEQ Water Grid (Water Grid) in the event of an incident which meets the Water Grid's definition of 'emergency'.

#### Background

This Emergency Response Plan has been developed in accordance with section 4.24 of *The Market Rules SEQ Water Market* (Market Rules), which requires the SEQ Water Grid Manager (Water Grid Manager) to prepare and publish an Emergency Response Plan that specifies:

- incidents which must be reported to the Water Grid Manager
- response levels for the types of incidents reported to the Water Grid Manager
- escalation and notification paths for each response level
- reporting and monitoring requirements for each response level
- responsibilities for preparing and issuing public statements, if required, for each response level
- any changes to the process for issuing Grid Instructions following a reported incident
- the process for operating the Water Grid following a Water Supply Emergency Declaration
- the process for preparing, issuing and amending Emergency Operating Instructions following a Water Supply Emergency Declaration
- arrangements, where applicable, for providing the Water Grid Manager with access to Grid Service Provider operated control rooms, real-time information, equipment and personnel following a Water Supply Emergency Declaration
- any other matter the Water Grid Manager considers appropriate.

This Plan provides guidance to the following entities:

- SEQ Water Grid Manager
- Queensland Bulk Water Supply Authority, trading as Seqwater
- Queensland Manufactured Water Authority, trading as WaterSecure
- Queensland Bulk Water Transport Authority, trading as LinkWater
- Distribution Service Providers, including:
  - Queensland Urban Utilities
  - Allconnex Water
  - Unitywater
- Tarong Energy Corporation
- Tarong North Energy Corporation
- CS Energy
- Tocuracreba Regional Council.

This Emergency Response Plan covers the Declared Water Services under the Water Act 2000 and the wastewater treatment plants associated with critical purified recycled water schemes or within a drinking water catefument.

#### **Objectives**

The objectives of this Emergency Response Plan are to provide:

- guidance, where appropriate, for Grid Participants on rating incidents and their role in managing emergencies
- information to Grid Participants on notification, reporting and communication processes and protocols pertinent to the Water Grid Manager, other entities and relevant authorities
- processes to ensure timely, appropriate and accurate information is relayed to relevant stakeholders relative to the severity of an incident or emergency
- a mechanism to assist Grid Service Providers to comply with sections 4.26 and 4.28 of the Market Rules
- a mechanism to assist Distribution Service Providers to comply with sections 4.27 and 4.29 of the Market Rules
- links to the Queensland Disaster Management System and the incident management plans of other agencies.



#### Tool/resource

Refer to 'Attachment D: Grid Participant Emergency Response Plan approval requirements'.

#### **Emergency Response Plan implementation and sustainability**

This section applies to both this Emergency Response Plan, controlled by the Water Grid Manager, and the individual Grid Participant emergency response plans.

#### Regular testing and review

At least once each year all emergency response plans must be tested by:

- undertaking a review that enables a gap analysis between this Emergency Response Plan and Grid Participant emergency response plans
- participating in at least one exercise with the Water Grid Manager and/or Grid Participants, allowing incident classification assessment, notification procedures and communication protocols to be practiced
- ensuring members of the Emergency Coordination Teams and Grid Participant Incident Management Teams understand their roles and responsibilities
- ensuring the Emergency Coordination Teams and Grid Participant Incident Management Teams take part in any emergency management planning activities that are undertaken within the Water Grid
- circulating a receipted copy of the formally documented results from any audits or reviews to all Grid Participants.



#### Tool/resource

Refer to 'Policy – General roles and responsibilities' and '® Establish command and control' for descriptions of the incident management and emergency coordination functions.

#### **Training**

- All Grid Participants are to implement a schedule to train staff new to their organisations regarding their internal emergency response plans.
- All staff who have specific roles within Grid Participant incident Management Teams are to regularly receive appropriate training and verification of understanding.
- The Water Grid Manager will provide advice on training in relation to this Emergency Response Plan, and will make its training materials available, to all Grid Participants for their further internal use.
- All training associated with emergency response plans is to be documented.

#### Internal understanding and document control

- All amendments to this Emergency Response Plan must be dated and recorded in the document control section.
- The Water Grid Manager takes no responsibility for the currency and accuracy of any uncontrolled copies of this Emergency Response Plan.
- Minutes from all meetings of the Emergency Coordination Teams and Incident Management Teams must be kept on record.



#### Tool/resource

'Document control' is the first section at the start of this Plan.

#### Amendment

Subject to the exceptions below, this Emergency Response Plan must only be amended through submission to the Minister in accordance with section 4.25 of the Market Rules.

The Water Grid Manager may amend and re-issue the following attachments to this Emergency Response Plan at any time:

- Attachment A: Emergency contact list
- Attachment D: Grid Participant Emergency Response Plan approval requirements
- Attachment E: E. coli alert escalation process
- Attachment F: Chlorine and monochloramine level exemptions
- Attachment G: Incident Notification Form
- Attachment H: Sample Situation Report (SITREP) template
- Attachment I: Informal Ministerial briefing template
- Attachment J: Incident Close-out Report
- Attachment K: Debriefing minutes template
- Attachment L: Post-emergency Report template
- Attachment M: Emergency response action checklist
- Attachment N: Emergency Management Team structure.

#### Acknowledgements

The following documents were used to assist in the preparation of this Emergency Response Plan:

- The Australasian Inter-service Incident Management System (third edition)
- Gold Coast Water Emergency Response Plan
- Ipswich Water Emergency Management Plan
- LinkWater Incident Management Plan
- The Market Rules SEQ Water Market
- Melbourne Water General Emergency Response Plan
- National Electricity Market Management Company Emergency Response Plan
- 'Queensland Health protocol for the management of major drinking water health-related incidents' (draft)
- Queensland Infrastructure Protection and Resilience Framework
- Queensland Plan for the Protection of Critical Infrastructure from Terrorism
- Seqwater Emergency procedure manual.

#### Definitions and terms

Command The responsibility for directing personnel and resources of a participant in the

performance of its role and tasks.

Control The overall direction of response activities in an incident situation.

Coordination The bringing together of elements to ensure effective response to emergencies.

Communications coordination

The emergency response function largely involving coordinating Water Grid

internal and external communications.

Critical infrastructure Infrastructure which, if destroyed, degraded or rendered unavailable for an

extended period, will impact water supply to South East Queensland.

Emergency A situation or occurrence that happens as a consequence of an incident and

demands immediate action.

For the purposes of this Plan, an 'emergency' is an incident that impacts on water quality, water supply reliability and/or public reassurance, and has an overall severity rating of Level 3, 4 or 5 under the severity classification

approach outlined in this Plan.

The emergency response function largely involving strategic command and **Emergency management** 

external communications.

**Emergency Operating** 

Instructions

Emergency Operating Instructions issued by the Water Grid Manager.

**Emergency Response Plan** A plan prepared by the Water Grid Manager or by a Grid Participant in

accordance with the Market Rules.

Grid Customer A Grid Customer of the Water Grid Manager as defined in Schedule 4 of the

Water Act 2000.

**Grid Instructions** Instructions prepared by the Water Grid Manager and given to the Water Grid

and Distribution Service Providers in accordance with the Market Rules.

**Grid Participant** An entity that is referred to in section 2.3 of the Market Rules.

Grid Service Provider Has the meaning given in Schedule 4 of the Water Act 2000 and includes a Bulk

Supplier, Manufactured Water Provider and Bulk Transporter.

Incident Any occurrence within or caused by the Water Grid that has resulted in, or has

> the potential to result in adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these and classified against a gradient from 1 to 5. Ongoing conditions that have the potential to result in adverse consequences and non-compliance with legal and

regulatory requirements are also considered to be incidents.

Incident management The emergency response function largely involving managing the physical

incident on-site.

Interagency Operations

Team

An expert reference panel assembled by the Water Grid Manager when required to provide technical, operational and risk assessment advice and

recommendations on any aspect of managing a given emergency.

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and security of the water supply, and in the actily of the Water Cod and God

Participants to deliver their contracted pervices

#### SEQ Water Grid Emergency Response Plan

Risk The chance of something happening that will have an impact on objectives. It is

measured in terms of the consequences of an event and their likelihood. (ISO

31000:2009 'Risk management'.)

Technical coordination The emergency response function largely involving coordinating whole-of-Grid

operations and support. It will often involve the use of Grid Instructions and

**Emergency Operating Instructions.** 

**Water Supply Emergency** 

Declaration

A Water Supply Emergency Declaration made in accordance with section 25B of

the Water Act 2000.

### **Policy**

### Definition of 'emergency' for this Plan

For the purposes of this Plan, an 'emergency' is an incident that impacts on water quality, water supply reliability and/or public reassurance, and has an overall severity rating of Level 3, 4 or 5 under the severity classification approach outlined in this Plan.

An emergency is usually called by the impacted Grid Participant on initial identification. However, the Water Grid Manager reserves an overriding right to call or escalate emergencies.

The following table clarifies the difference between an incident and an emergency for this Plan.

Table 1: Incident vs emergency

Waaraanaanaanaanaanaanaanaanaanaanaanaana	Incident	Emergency
Definition	Any occurrence that has resulted in, or has the potential to result in adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these	A situation or occurrence that happens as a consequence of an incident and demands immediate action
General nature	Physical event	Broader whole-of-Grid and public interface outcomes – may be physical and/or intangible
Location	Site-based	Not usually location-based
Management focus	Operational – physical rectification	Corporate/supporting services – e.g. coordinating whole-of-Grid assistance, stakeholder management, communications, etc.
Relevant severity levels	ີ 1,2 🛭 Alert 🗒 3 🔳 4,5	⊠ 3 ■ 4,5

This Plan is not concerned with the physical rectification of the incident (incident management), which is managed via the impacted Grid Participant's internal Emergency Response Plan, but with the broader whole-of-Grid and public interface outcomes of the emergency. While Alerts are not defined as an emergency, they do have the same notification requirements as Level 3, 4 and 5 incidents.

Level 1, 2 and Alert incidents, as smaller-scale events, do not typically have these broader impacts and therefore are not subject to this Emergency Response Plan. The exception to this is when an Emergency Management Team has been formed to respond to a Level 3, 4 or 5 emergency, then the Level 1, 2 or Alert incident must fall under the Emergency Response Plan. Level 3, 4 and 5 incidents, however, can be expected to have broader impacts and result in associated emergency situations; therefore their management is subject to this Emergency Response Plan.



#### Tool/resource

Refer to '**0** Identify and assess incident severity' for more detailed descriptions of incidents and severity ratings.

### Link to SEQ Water Grid Risk Management Framework

The Emergency Response Plan provides a framework for managing whole-of-Grid emergencies and aligns with the SEQ Water Grid Risk Management Framework (Risk Management Framework).

The Risk Management Framework integrates the preventative, monitoring and contingent controls and ensures the Water Grid is best positioned to prevent, prepare, respond and recover from strategic and operational risks that threaten its ability to deliver a secure water supply for South East Queensland. Specifically, the Risk Management Framework integrates the management of risk, security, business continuity and emergency response.

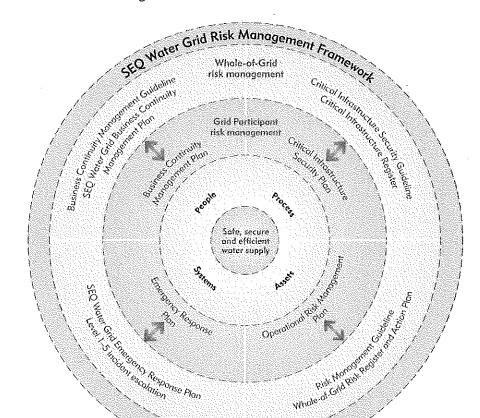


Figure 1: SEQ Water Grid Risk Management Framework

### **Emergency Response Plan priorities**

The priorities of this Emergency Response Plan are as follows:

- 1. maintaining the safety of employees and the public
- 2. protecting the quality of the water supply to Grid Customers
- 3. protecting the environment
- 4 protecting continuity of supply to Grid Customers
- 5. protecting landowner and community property
- protecting Water Cold assets and infrastructure
- maintaining the Water Grid's reputation.

#### Critical infrastructure

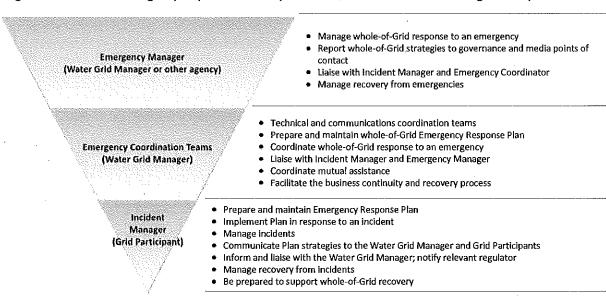
The Water Grid as a whole is deemed 'critical infrastructure' under the *Queensland Plan for the Protection of Critical Infrastructure from Terrorism*. This document is intended to be consistent with current Queensland Disaster Management System arrangements for such infrastructure.

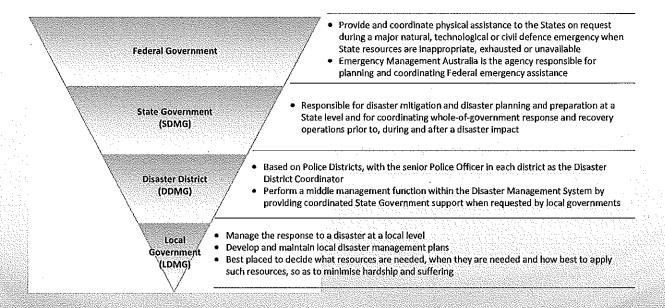
#### General roles and responsibilities

#### Emergency response hierarchy

The Water Grid has a three-tiered response for managing incidents and emergencies (refer to Figure 2). Within each level of the structure, Grid Participants are responsible for managing the incident to a successful resolution, while informing the next level to assist in emergency response. Also included in Figure 2 is the Queensland Disaster Management System, which is activated, when required, to manage and coordinate support for disaster-stricken communities.

Figure 2: Water Grid emergency response hierarchy and the Queensland Disaster Management System





#### **Emergency response functions**

The four key functions involved in emergency response are as follows:

Table 2: Command and control function responsibilities

Function	Description	Responsible entity
Incident management	Managing the physical incident on-site	Impacted Grid Participant/s
Technical coordination	Coordinating whole-of-Grid operations and support	Water Grid Manager
Communications coordination	Coordinating Water Grid internal and external communications	Water Grid Manager
Emergency management	Strategic command and key stakeholder management	Normally the Water Grid Manager (In some circumstances this function may be assumed by another agency with relevant expertise or a strong interest in the incident)



#### Tool/resource

Refer to '® Establish command and control' for more detail on key emergency response functions.

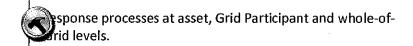
#### All Grid Participants

Under the Emergency Response Plan, all Grid Participants have the following general responsibilities:

- develop an Emergency Response Plan that is consistent with this Emergency Response Plan and the Market Rules
- manage the response to incidents and emergencies in accordance with this Plan and more detailed plans specific to each Grid Participant, including Business Continuity, Emergency Response, Risk Management, and other risk management mechanisms
- communicate the incident (as per agreed communications protocols) as appropriate to:
  - the relevant emergency authorities, where applicable
  - the Water Grid Manager
  - the relevant regulator
  - responsible Ministers, Mayors or Chief Executive Officers (CEOs), where applicable
  - other affected Grid Participants
- work cooperatively with the Water Grid Manager Emergency Coordination Teams and any appointed Emergency Manager
- utilise the Emergency Response IT Solution when implemented for all Emergency Response related activities.

#### Tool/resource

The emergency response outline roadmap at Attachment B Illustrates Grid Participant responsibility for enveryouty



#### Water Grid Manager

In the event of an incident, the Water Grid Manager is effectively a Grid Participant, albeit with a specific role.

The Water Grid Manager is not to:

manage the on-site response to the incident itself (incident management).

The Water Grid Manager is, for a Level 3 incident and above, to:

- conduct emergency coordination for both the technical and communication streams
  - liaise with the Incident Management Team established by the impacted Grid Participant
  - undertake modelling for the Water Grid and issue new Grid Instructions, if required
  - provide mutual assistance as agreed between the Water Grid Manager and other Grid
     Participants
- conduct emergency management unless another Emergency Manager is put in place
  - coordinate the combined Emergency Management Team
  - be the coordination point (conduit) for communications about the incident
  - facilitate debriefings of incidents at Level 3 or above as part of the recovery and close-out process

#### SEQ Water Grid Communications Unit

The SEQ Water Grid Communications Unit (Communications Unit) was established to act on behalf of the State-owned entities as a 'single' voice for communications of the Water Grid operational activities.

In the event of an emergency, the Communications Unit is responsible for managing all communications events relating to the emergency, including:

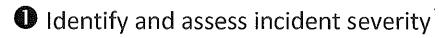
- arranging media interviews, press releases and responding to media enquiries
- briefing the Minister's office
- preparing and distributing (following Emergency Manager approval) situation reports (SITREPs)
- preparing and distributing Product Quality Notifications, Q&As and fact sheets as appropriate
- liaising with Communications Managers in the affected Grid Participants to ensure consistency of
   mensuming

The agreed communications protocols provide further detail on the procedures to be followed in an emergency.



# Quick guide to emergency response

tep		Key tasks	Tools
M	Identify and assess incident severity	Assess the incident	Table 3: Incident severity classification levels
	Actions to determine initial incident level		Office of the Water Supply Regulato water quality reporting guideline
2	Notify Actions to alert	Notify Grid Participant emergency contact	Attachment A: Emergency contact list
J	impacted Grid Participants and	Notify the Office of the Water Supply Regulator, if required	Drinking water incident hotline – 2 1300 596 709
	stakeholders	Notify the Water Grid Manager Duty Manager of Alert and Level 3–5 incidents:  • Alert/Level 3 – ☎ and email form – ☑ within 2 hours  • Levels 4 and 5 – ☎ and email form – ☑within 1 hour	Water Grid Manager Duty Manager — 22 (07) Attachment G: Incident Notification Form
		Notify other key stakeholders as required	Attachment A: Emergency contact list
*******		Open Emergency Response Log/s	Emergency Response Log
	Establish command and control	Establish the Emergency Management Team	Table 7: Command and Control Framework
Actions to determine the Emergency Manager, and continuously assess risk level and command	the Emergency Manager, and continuously assess risk	Review initial risk assessment	Table 3: Incident severity classification levels
ZĄ	Manage the emergency	Grid Participant manages incident at asset/site level	Grid Participant internal Emergency Response Plan
	Actions to eliminate the immediate risk to	Coordinate the emergency at whole-of-Grid level	Grid Instructions and Emergency Operating Instructions
	Water Grid operations	Implement communication protocols	Water Grid communication protocol Attachment C: Communication workflow
	Manage the	Agree recovery objectives	Recovery consultation process
[5]	recovery	Recover asset	Recovery checklist
	Actions to return Water Grid operations to normal	Implement close-out communications protocols	Water Grid communication protocol Attachment J: Incident Close-out Report
<b>(3)</b>	Improvement actions	Debrief following emergency close- out	Attachment K: Debriefing minutes template
Ž	Actions to improve future Water Grid	Draft Post-emergency Report	Attachment L: Post-emergency Report template
	operations	Update Risk Registers	Risk Registers





# Snapshot: Identify and assess incident severity

Actions to determine the initial level of incident classification:

- Assess its level of severity.
- Determine if the incident can be considered an emergency under this Emergency Response Plan.

Refer to the emergency response outline roadmap provided at Attachment B.

# Is it an emergency?

This Emergency Response Plan is primarily concerned with Alert and Levels 3, 4 and 5 incidents that impact on:

- · water quality
- water supply reliability
- public reassurance.

An emergency is usually called by the impacted Grid Participant on initial identification. However, the Water Grid Manager reserves an overriding right to call, escalate or de-escalate emergencies.

# What is its level of severity?

Table 3: Incident severity classification levels details the incident classifications and criteria that form the basis of this Emergency Response Plan for the Water Grid. In situations where an incident level is not clearly defined by Table 3, determination of the incident level is at the discretion of the Water Grid Manager.

While the 'public reassurance' criterion may not always seem an active concern at the outset, it is important to consider the likelihood of media attention and the risk of negative coverage.

### Alert level

A classification level known as Alert is to be used for incidents or occurrences that may become more severe. An incident meets the Alert level criteria if:

- it is currently a Level 1 or 2 incident but has potential impacts that, if realised, would trigger a
   Level 3–5 emergency
- it has not yet occurred, but is considered highly likely to be imminent with a Level 3–5 severity level.

Examples would include a cyclone headed for the South East Queensland area or a positive first exceedence of the Austrolian Onlinking Water Guidelines (2004) where a second test for confirmation has not yet been done.

SEQ Water Grid Emergency Response Plan

Table 3: Incident severity classification levels

Level 1 – Insignificant			
General principles	Incident criterion – oi	Incident criterion – direct impacts on water supply	Examples
Little disruption to normal operations, low increase in normal operating costs	Water quality	<ul> <li>A critical control point alert exceeded but within critical limits</li> <li>Insignificant impact, little disruption to normal operation</li> </ul>	<ul> <li>Local water quality incident isolated to a zone; possibly caused by valve change</li> </ul>
Local incident with impact limited to a single facility within one Grid Participant	Water asset failure	Minor unplanned asset failure – no facility output affected	<u>ا</u> کا
Overall system impact limited to temporary or no	Water quantity	<ul> <li>Limited or no impact on bulk Grid Customers</li> <li>Minor short-term disruption to retail Grid Customers</li> </ul>	<ul> <li>Early indications of blue-green algae – storage being monitored</li> </ul>
reduction in capacity No effect on monthly Grid Instruction volumes	Security and natural disaster	Localised natural disaster damage	<ul> <li>Minor storm damage to asset</li> </ul>
Minor or no impact on bulk	Incident criterion – ancillary impacts	associated with water supply	Examples
Minor short-term impact on a small number of retail Grid Customers	Health and safety of employees or public	<ul> <li>Employee minor injury sustained requiring first aid</li> <li>Slight injury or health affects</li> <li>Low risk of other injuries</li> </ul>	<ul> <li>Slip or fall resulting in lacerations requiring first aid</li> </ul>
Managed by the resources of the affected Grid Participant without the need to notify	Environment	Brief pollution event but no environmental impact. Insignificant risk of breaching environmental regulatory requirements	Minor spike in discharge concentrations
otner Grid Participants, Emergency Services or the Water Grid Manager	Public reassurance	Lack of public interest (e.g. reporting, not front page) in suburban newspapers	<ul> <li>Single adverse local radio report</li> <li>Call centre receives a number of complaints but limited to a</li> </ul>
These incidents occur as part of normal operations and are managed by a site supervisor or relevant duty officer as part of their normal responsibilities			small area, e.g. a street or two
	онтан С		
		***	*{

# SEQ Water Grid Emergency Response Plan

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Leve	Level 2 – Minor			TERRETARION CONTRACTOR SERVICES CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR C
Gen	General principles	Incident criterion - direct impacts or	ect impacts on water supply	Examples
•	Minor or no impact on bulk Grid Customers	Water quality	<ul> <li>Critical control point limits exceeded, even with corrections in place:</li> </ul>	<ul> <li>Turbidity increased to 1.2 NTU due to lime dosing but reduced to 0.8 at exit of clear water storage</li> </ul>
•	Minor short-term impact on a small number of retail Grid Customers	, man	<ul> <li>still within Australian Drinking Water Guidelines</li> <li>(2004) health values</li> <li>minor impact for small population, some</li> </ul>	
•	The incident has no effect on		manageable operation disruption	
- /	monthly Grid Instruction volumes	Water asset failure	Unplanned asset failure and reductions to asset output, less than or equal to one day direction where.	A mechanical failure occurs at a water treatment plant and the actimated time to repair the failure aveaged; the current
•	Can be handled within the scope of normal operating protocols between Grid Participants		supply is reduced, but not lost  supply can be sourced from elsewhere if necessary	endurance of the clear water storage. Seqwater contacts the Distribution Service Provider who reduces the water demand from the water treatment plant to allow time for the rectification works
•	Can be dealt with by the resources of the affected Grid Participants	Water quantity	<ul> <li>Single raw water supply source within the Water Grid is showing indications of failure</li> </ul>	Blue-green algae bloom or major turbidity event occurs     whereby use of a single supply source needs to be reduced
		Security and natural	<ul> <li>Localised natural disaster damage</li> </ul>	Storm causes minor interruptions due to loss of power supply
	3	disaster		
		Incident criterion – ancillary impacts	cillary impacts associated with water supply	Examples
		Health and safety of	<ul> <li>Employee medical attention required – restricted work duties or limited lost work time, Public injury</li> </ul>	<ul> <li>Slip or fall resulting in broken limbs, lacerations requiring stitches or hospitalisation.</li> </ul>
	nomentari		<ul> <li>Inherent risk for more injuries. Immediate action to be taken at Grid Participant level to ensure public safety</li> </ul>	
		Environment	<ul> <li>Minor transient environmental impact</li> </ul>	<ul> <li>A spike in discharge concentrations but unlikely to exceed</li> </ul>
			<ul> <li>Low risk of breaching environmental regulatory requirements</li> </ul>	95 percentile licence limits
	,		<ul> <li>Grid Participant level corrective action</li> </ul>	
		Public reassurance	<ul> <li>Public questioning of Water Grid operations and decisions for local assets (e.g. local newspaper)</li> </ul>	Short-term adverse media at a local level
				one suburb

# SEQ Water Grid Emergency Response Plan

Ā	Alert		
Ğ	General principles	Incident criterion	Examples
•	Classification for incidents with a possible severity of 3–5 where the consequences have not yet occurred	Water quality	<ul> <li>E. coli has been detected, and an Alert is raised while a re-sample is carried out to confirm the contamination event (see 'Attachment E: E. coli Alert escalation</li> </ul>
•	A potential Level 3–5 incident is considered highly likely to be imminent		process')
•	An incident has occurred with severity below Level 3, however, there is a possibility that further deterioration of the situation will	311111111111111111111111111111111111111	<ul> <li>Natural disaster, such as cyclone, flood, fire, etc., forecast or in progress and likely to cause an impact, though this has not yet happened</li> </ul>
•	breach a Level 3–5 threshold An incident has occurred with severity below Level 3, however, the		<ul> <li>National counter-terrorism Alert level is raised one level</li> </ul>
	Grid Participant has notified the responsible Minister/s of media interest or other circumstances of interest, and therefore must also notify the Water Grid Manager	Public reassurance	Public reassurance • Any incident or potential incident that has /could attract media interest, making negative coverage a possibility
•	The Water Grid is on standby to manage a potential incident	******	
•	Where possible, relevant Grid Participants/Water Grid Manager	******	
	take action in advance to prepare for the incident eventuating		
•	When the incident eventuates, reclassify its severity level in		
1	accordance with this Plan	***************************************	

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<ul> <li>Australian Drinking Water Guidelines (2004) health values confirmed as exceeded 1,2</li> </ul>
Aesthetic impact for large population, but manageable through modification to operations
Significant unplanned asset failure and reductions to asset output greater than one day duration, and may impact Grid Contract obligations being met
Any single supply source failure
Single raw water supply source within the Water Grid is out of service whereby supply is affected by >20% of Grid Instruction volume
Natural disaster or security event that would disrupt operations and/or service delivery
Incident criterion – ancillary impacts associated with water supply
Single fatality involving an employee or a member of the public
Significant risk of further injuries Immediate corrective action by Grid Participant
Significant release of pollutants with mid-term recovery
High risk of environmental regulatory requirements breach with the potential to affect drinking water supply works
Notification of an incident to a regulator
Public questioning of Water Grid operations and decisions for local assets (e.g. regional newspaper, regulator
enquiry)

LinkWater and Seqwater chlorine level exemptions apply (Attachment F) The Water Grid Manager to use E. coli Alert escalation process flowchart (Attachment E)

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General principles  Significant principles  The Water quality  Major impact for analyte negions affected. Multiple Grid  For analy population or savet failure  The Water Grid Manager in pact for dividing water or incident criterion—and lary incorter of control (or incident) rooms  The Water Grid Manager in water or incident criterion—and lary incorte or of control (or incident) source or or dividing water or larkwater	Examples  Cryptosporidium event at a minor water treatment plant only supplying an isolated small town, which results in a Boil Water Notice being issued  There are repeated exceedences of a chronic health guideline value affecting a small population, e.g. total trihalomethanes, where Queensland Health or The Regulator determines there may be a risk to public health  Any water treatment plant that cannot produce water to serve the local community and the Water Grid cannot fully meet demand, resulting in interruption to customer supply for over 8 hours. Local area needs to go on restrictions, e.g. water treatment plant supplying isolated local government area  Future drought declaration – restrictions implemented  Fire has destroyed a single water treatment plant  Credible threat to major infrastructure within the Water Grid received by a Grid Participant or the Government  Australian pandemic Alert phase 6a, 6b or 6c <sup>3</sup> Examples  Accident caused by water craft on recreational waters  resulting in multiple fatalities  Major release of water treatment plant sludge into a water course  Major release of water treatment plant sludge into a water course  Major sewage spill upstream of a water treatment plant  Adverse State-wide or national media attention  Call centre receives a number of complaints related to multiple suburbs or two or more retailers
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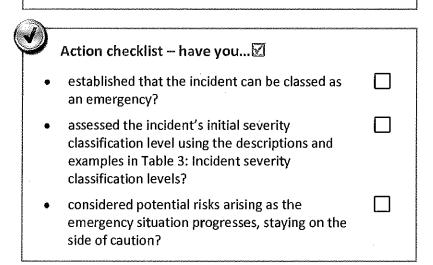
Level 5 — Catastrophe			
General principles	Incident criterion – dir	Incident criterion – direct impacts on water supply	Examples
<ul> <li>Large-scale impact across South East Queensland, other utilities affected. Requires Government intervention at State and Federal levels to manage the incident</li> </ul>	Water quality	<ul> <li>Major impact for large population, extreme volume of complaints</li> <li>Complete failure of systems</li> </ul>	<ul> <li>Cryptosporidium event at a major water treatment plant         which results in a Boil Water Notice being issued for a region         There are repeated exceedences of a chronic health guideline         value affecting a large population, e.g. total trihalomethanes,         where Queensland Health or the Regulator determines that         there may be a risk to public health or a public health risk is         confirmed</li> </ul>
<ul> <li>Minister is likely to issue a     Water Supply Emergency     Declaration</li> <li>Major impact for large</li> </ul>	Water asset failure	<ul> <li>Extreme unplanned asset failure – weeks to months to rectify</li> <li>Major rectification works to re-establish water supply</li> </ul>	Dam wall breach
populations, complete failure of systems	Water quantity	<ul> <li>Drought supply reserves are reaching the emergency volumes</li> </ul>	<ul> <li>Extreme restrictions apply and emergency supply projects instigated</li> </ul>
<ul> <li>An emergency incident or combination of incidents with the potential for large- scale short- and long-term impacts to human well-being and the environment</li> </ul>	Security and natural disaster	Security and natural  disaster  disaster  minimum mater supply	<ul> <li>Bomb blast impacts major asset</li> <li>Flood, fire and cyclone impacts on multiple assets</li> <li>Australian pandemic Alert phase 6a, 6b or 6c<sup>4</sup></li> <li>Examples</li> </ul>
including terrorism impacts or natural disasters	Health and safety of employees or public	<ul> <li>Multiple fatalities</li> <li>Extreme risk of further fatalities and injuries leading to a Declared State of Emergency</li> </ul>	<ul> <li>Breach of dam wall causing flooding and multiple casualties</li> </ul>
	Environment	<ul> <li>Catastrophic, long-term environmental impacts with the potential to affect drinking water supply works</li> <li>Extreme risk of breaching environmental regulatory requirements. Immediate notification of relevant authorities</li> </ul>	<ul> <li>Any incident causing the loss of a water source for more than one month, or the loss of an entire ecosystem</li> </ul>
	Public reassurance	Widespread concerns expressed by public and loss of trust in Water Grid operations (e.g. international TV news headlines and/or government investigation)	<ul> <li>Adverse national or international media attention</li> <li>Call centre receives an extreme number of serious complaints related to multiple retailers</li> </ul>

<sup>&</sup>lt;sup>4</sup> Depending on Water Grid impacts assessment



# Tool/resource

- Refer to the Office of the Water Supply Regulator's 'Water quality and reporting guideline for a drinking water service', and 'Drinking water quality: incident reporting' form available at <a href="www.derm.gld.gov.au">www.derm.gld.gov.au</a>.
- For information on carrying out impact assessments, refer to the SEQ Water Grid Risk Management Plan.



# Notify



# **Snapshot: Notify**

Actions to alert impacted Grid Participants and stakeholders:

- Site staff to follow Grid Participant internal Emergency Response Plan notification procedures.
- For Alert and Level 3, 4 and 5 incidents, Grid Participant nominated emergency contact to notify the Water Grid Manager Duty Manager.
- Notify the Office of the Water Supply Regulator, if required.
- Notify other key stakeholders, as required.
- Open Emergency Response Log/s.

Refer to the emergency response outline roadmap provided at Attachment B.

# Notification responsibilities

The essential notification responsibilities upon detection of an incident are summarised in the following table.

Table 4: Notification responsibilities

Incident level	Grid Participant emergency contact	Water Grid Manager Duty Manager
1 and 2	Yes As per Grid Participant internal Emergency Response Plan and operating protocols	No
Alert	Yes As per Grid Participant internal Emergency Response Plan and operating protocols	Yes Within 2 hours of incident detection  Email Incident Notification Form within 2 hours of incident detection
	Yes As per Grid Participant internal Emergency Response Plan and operating protocols	Yes Within 2 hours of incident detection  Email Incident Notification Form within 2 hours of incident detection
4 and 5	Yes As per Grid Participant internal Emergency Response Plan and operating protocols	Yes Within 1 hour of incident detection  Email Incident Notification Form within 1 hour of incident detection

# Grid Participant emergency contact

Each Grid Participant must identify a nominated single point of contact to provide formal notification of incidents and to liaise initially with the Water Grid Manager. The nominated person or position must be available for contact 24 hours a day.



Toci/resource

Refer to Attachment & Emergency contact list.

# Water Grid Manager Duty Manager

The impacted Grid Participant's nominated delegate must contact the Water Grid Manager Duty Manager:

- by phone
  - Alert and Level 3 within 2 hours of the incident being identified
  - Levels 4 and 5 within 1 hour of the incident being identified

### and

- by emailing a completed Incident Notification Form
  - Alert and Level 3 within 2 hours of the incident being identified
  - Levels 4 and 5 within 1 hour of the incident being identified.



### **Activate Emergency Response Plan**

To activate this Plan, in the event of an Alert or Level 3–5 incident, notify the Water Grid Manager Duty Manager

NOTIFY BY BOTH Phone

Email: emergency



### Tool/resource

Refer to Attachment G for a copy of the Incident Notification Form. This is also available as a separate Word file on request from emergency

# Office of the Water Supply Regulator

For Alert, Level 3, 4 and 5 water quality incidents requiring the Office of the Water Supply Regulator to be notified, a completed Drinking water quality: incident reporting form, Part A will be accepted by the Water Grid Manager instead of the Incident Notification Form. As this form contains much of the same information as the Incident Notification Form, if the incident only involves water quality, it is not necessary to send both forms. However, the copy of the Office of the Water Supply Regulator form sent to the Water Grid Manager should be accompanied by supplementary information advising on:

- incident rating
- media interest
- other additional relevant information.



### Tool/resource

The Office of the Water Supply Regulator's Drinking water quality: incident reporting form, Part A is available at www.dom.off.gov.iic.

# Notify other key stakeholders

During an incident, impacted Grid Participants may need to alert other internal stakeholders. The following table outlines some key stakeholders who may require notification depending on the classification of the incident. This table is for indicative purposes only. For more detail on stakeholder notification responsibilities, refer to '@ Manage the emergency – Communication'.

Grid Participants should confirm with the Water Grid Manager which stakeholders they have notified.

For any incident of any level where a State-owned Grid Participant is involved and requires notification to the Minister's office, the Communications Unit must be notified to facilitate this. The Informal Ministerial briefing template at Attachment I should be used.

Initial notification of incidents to the Minister's office will be made as soon as practicable.

Table 5: Key stakeholder notification

Incident level	Sis/	Queensland Water Commission/Department of Environment and Resource Management		Office of the Water Supply Regulator	Queensland Health (major drinking water health- related incident)	Queensland Police Service	Department of Community Safety (Emergency Services)	Department of Employment, Economic Development and Innovation
1		**************************************	•		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
2	*****************		•			ס	ס	ס
Alert	•	•	•	•	•	s required	quire	quire
3	•	•	•	•	•	s rec	As required	As required
4	•	•	•	•	•	∢	٩	٩
5	•	•	•	•	•			



## Tool/resource

- Refer to Attachment A: Emergency contact list.
- Refer to 'Queensland Health protocol for the management of major drinking water health-related incidents'.
- Refer to Attachment I: Informal Ministerial briefing template.

# Record keeping - Emergency Response Log

To keep a record of all relevant communications, meetings, events and actions, each party to the emergency response must keep a log from the time the incident is first identified or notified. By the end of the emergency response, all relevant logs must be consolidated by the Water Grid Manager/lead agency. Details captured must include:

- entry date and time
- type e.g. phone call, email, meeting, event, action
- participants
- location
- description
- · actions arising.



## Tool/resource

A copy of the Water Grid Manager's Emergency Response Log template is available on request.

	Action checklist – have you 🗹	
•	notified the Grid Participant internal emergency contact?	
•	phoned to notify the Water Grid Manager Duty Manager if it is an Alert or a Level 3, 4 or 5 emergency?	
•	emailed the Water Grid Manager Duty Manager a completed Incident Notification Form (Attachment G)?	
•	sent the Office of the Water Supply Regulator a completed Drinking water quality: incident reporting form, Part A, if applicable (copy to Water Grid Manager Duty Manager)?	
•	notified the relevant key stakeholders?	
•	opened an Emergency Response Log?	



# Establish command and control



# Snapshot: Establish command and control

Actions to determine the Emergency Manager, and continuously reassess risk level and command and control through more detailed risk assessment:

- Establish the Emergency Team.
- Review the initial risk assessment and the command and control structure continuously throughout steps @ and @.

Refer to the emergency response outline roadmap provided at Attachment B.

# Defining incident vs emergency

The division of command and control functions is to a great extent dependent on differentiating between the physical incident and the broader emergency situation.

Table 6: Incident vs emergency

	Incident	Emergency
Definition	Any occurrence that has resulted in, or has the potential to result in adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these	A situation or occurrence that happens as a consequence of an incident and demands immediate action
General nature	Physical event	Broader whole-of-Grid and public interface outcomes – may be physical and/or intangible
Location	Site-based	Not usually location-based
Management focus	Operational – physical rectification	Corporate/supporting services – e.g. coordinating whole-of-Grid assistance, stakeholder management, communications, etc.
Relevant severity levels	1,2 ■ Alert ■ 3 ■ 4,5	□ 3 □ 4,5

Level 1, 2 and Alert incidents, as smaller-scale events, do not typically have the broader impacts which result in an associated emergency situation, and therefore are not subject to this Emergency Response Plan. The exception to this rule is when there is already an emergency response for a higher level incident being managed as per the protocols contained in this Plan. This requires the Level 1, 2 or Alert incident to be managed as part of the higher emergency response.

Level Alert, 3, 4 and 5 incidents, however, can be expected to have broader impacts and result in associated emergency situations, and therefore their management is subject to this Emergency Response Plan. While Alerts are not defined as an emergency, they do have the same notification requirements as Level 3, 4 and 5 incidents.

# Command and control functions

The four key functions for command and control of an emergency are as follows:

Table 7: Command and control function responsibilities

Function	Description	Key responsibilities
Incident management	Managing the physical incident on-site	Actions undertaken to manage the incident under Grid Participant's internal Emergency Response Plan, including both the operational response and the supporting staff functions, including legal, insurance, human resources, security, Grid Participant operability and liabilities etc.
Technical coordination	Coordinating whole-of- Grid operations and support	<ul> <li>Assist the Emergency Manager</li> <li>Facilitate interagency liaison</li> <li>Facilitate resource sharing and mutual assistance among Grid Participants from an operations perspective</li> <li>Seek and share additional expert advice</li> <li>Remodel the water security position</li> <li>Issue Grid Instructions and Emergency Operating Instructions, as necessary</li> <li>Facilitate close-out debrief</li> <li>Prepare Technical Operations Strategy for Emergency Management Team approval</li> </ul>
Communications coordination	Coordinating Water Grid Internal and external communications	<ul> <li>Assist the Emergency Manager</li> <li>Internal stakeholder management</li> <li>Facilitate interagency liaison</li> <li>Prepare all internal and external communications materials as required</li> <li>Issue all internal communications</li> <li>Facilitate resource sharing and mutual assistance among Grid Participants from a communications perspective</li> <li>Seek and share additional expert advice</li> <li>Prepare Communications Strategy for Emergency Management Team approval</li> </ul>
Emergency management	Strategic command and key stakeholder management	<ul> <li>Strategically manage response to the emergency</li> <li>Determine risk management strategy</li> <li>Coordinate investigations</li> <li>Single contact point (Emergency Manager) for the emergency unless this is delegated to other Emergency Response Team member/s</li> <li>Key stakeholder management</li> <li>Approve all external communications:</li> <li>Briefings</li> <li>Media releases</li> <li>Public interface</li> <li>Approve Technical Operations and Communications Strategies</li> <li>Issue all external communications</li> </ul>



### Tool/resource

Refer to the emergency response outline roadmap at Attachment B.

# **Function ownership**

Under normal circumstances, the Water Grid Manager will combine the emergency management function with the coordination functions. However, in some circumstances the emergency management function may be assumed by another agency with relevant expertise or a strong interest in the incident.

When an external agency takes the emergency management role, the Water Grid Manager will continue to act as the lead for the Water Grid, representing the Water Grid to the Emergency Manager.

Table 8: Emergency function ownership

Function	Owner	Circumstances
Incident management	Impacted Grid Participant/s	Always
Technical coordination	Water Grid Manager	Always
Communications coordination	Water Grid Manager	Always
Emergency	Water Grid Manager	Most emergencies – 'default' Emergency Manager
management		The Water Grid Manager will combine the emergency management and emergency coordination functions unless another agency with an overriding interest assumes the emergency management function
	Office of the Water Supply Regulator	May assume the emergency management function for emergencies involving water quality
		The Water Grid Manager will contact the Office of the Water Supply Regulator in the event of a relevant emergency to establish who will take the emergency management role
	Queensland Health	Will assume the emergency management function for major drinking water health-related emergencies, as the organisation best able to manage public health risk
	The hear	The Water Grid Manager will contact Queensland Health in the event of a health-related emergency to establish who will take the emergency management role
	Premier's Department	May assume the emergency management function for Level 4 and 5 emergencies that are particularly severe incidents or have attracted a particularly high level of public interest
		The Premier's Department will be briefed on the emergency via the Department of Environment and Resource Management, and will advise the Water Grid Manager if it decides to take the emergency management role

Function	Owner	Circumstances
	Emergency Services/ State Disaster Management Group	May assume the emergency management function for Level 4 and 5 emergencies that require a very large-scale response or which fall under the Queensland Disaster Management System (e.g. terrorism, natural disasters)  The Water Grid Manager will contact Emergency Services/State Disaster Management Group in the event of a relevant emergency to establish who will take the emergency management role



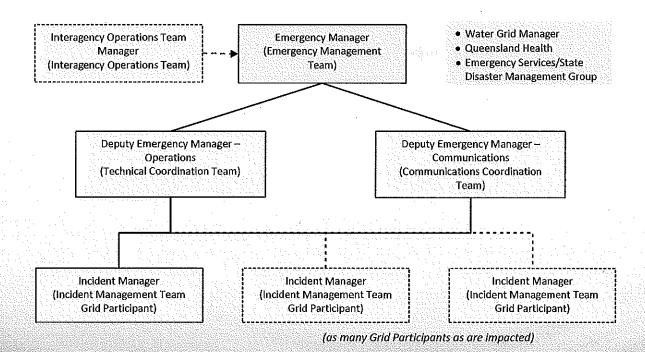
## Tool/resource

- Refer to the Grid Participant's internal Emergency Response Plan and operating protocols.
- Refer to '@ Manage the emergency'.
- Refer to 'Queensland Health protocol for the management of major drinking water health-related incidents'.
- Refer to Attachment A: Emergency contact list.

# **Emergency Response Team structure**

Based on the above functions and their 'owners', the Emergency Response Team structure will be as follows:

Figure 3: Emergency Response Team structure



For emergencies where the Water Grid Manager is the Emergency Manager, the Water Grid Manager will determine the composition of the Emergency Management Team. For uncomplicated Level 3 incidents, the Emergency Management Team may consist at the minimum of a designated Emergency Manager from within the Water Grid Manager, who may also be designated as the Emergency Coordination Teams.

# Function teams membership

In general terms, the function teams shown above will be made up as follows:

Table 9: Function teams membership

Function	Agency	Team	Team leader	Team members
Incident management	Grid Participant	Incident Management Team	Incident Manager	Grid Participant staff
Technical coordination	Water Grid Manager	Technical Coordination Team	Deputy Emergency Manager - Operations	<ul><li>Water Grid Manager staff</li><li>Grid Participant staff</li></ul>
Communications coordination	Water Grid Manager	Communications Coordination Team	Deputy Emergency Manager - Communications	<ul><li>Water Grid Manager staff</li><li>Grid Participant staff</li></ul>
Emergency management	Water Grid Manager	Emergency Management Team	Emergency Manager	<ul> <li>Water Grid Manager staff</li> <li>Grid Participant executive staff</li> <li>Communications staff</li> </ul>
	Queensland Health	Emergency Management Team based on Major Water Incident Management Group	State Health Incident Coordinator (Chief Health Officer)	<ul> <li>Senior Health Officer         Queensland Health</li> <li>CEOs of Water Grid entities</li> <li>Premier's Department</li> <li>Ministerial staff</li> </ul>
	Emergency Services/ State Disaster Management Group	Emergency Management Team based on State Disaster Management Group	State Disaster Manager	Communications staff     State regulators     Specialist advisors, as needed

# Incident Management Team

The structure and composition of the Incident Management Team will be in accordance with the impacted Grid Participant/s' internal Emergency Response Plan. It will largely rely upon internal staff resources.

# Technical Coordination Team

The structure and composition of the Technical Coordination Team will be as directed by the Emergency Management Team Deputy Emergency Manager – Operations. It will rely upon staff resources from within the Water Grid Manager, but may also draw upon technical and operations staff of the impacted Grid Participants. The function of the Technical Coordination Team is to coordinate and manage implementation within the Water Grid of actions required by the Emergency Management Team. For straightforward emergencies, the Technical Coordination Team and the Communications Coordination Team may be combined with the Emergency Management Team.

### Communications Coordination Team

The structure and composition of the Communications Coordination Team will be as directed by the Emergency Management Team Deputy Emergency Manager – Communications. It will rely upon staff resources from within the Water Grid Manager, but may also draw upon communications and media staff of the impacted Grid Participants.

The function of the Communications Coordination Team is to coordinate and manage implementation within the Water Grid of actions required by the Emergency Management Team. These actions will focus on internal and external communications. For straightforward emergencies, the Technical Coordination Team and the Communications Coordination Team may be combined with the Emergency Management Team.

# **Emergency Management Team**

The structure and composition of the Emergency Management Team will vary according to the emergency situation and the entity undertaking this function. As a guide, for incidents in which no external entities are involved, the Emergency Management Team is likely to consist of the Emergency Manager, an executive from each impacted Grid Participant and Water Grid Manager staff. All invitations will be made by the Emergency Manager, by phone or face-to-face. Email is not to be solely relied upon.

An indicative structure has been included in Attachment N for use as a default. Depending on the emergency situation, it may require some changes to effectively manage the response. The Emergency Manager will be the single point of contact for the emergency, unless this function is delegated to other team member/s.

Normally a staff member from the Water Grid Manager will be appointed as the Deputy Emergency Manager — Communications for the emergency response. A staff member from the Water Grid Manager will be appointed as the Deputy Emergency Manager — Operations as well. The appointment of these positions will be confirmed by the Emergency Management Team at its first meeting. For very straightforward emergencies, the Emergency Management Team may consist of a single manager from the Water Grid Manager.

For most emergencies, the Water Grid Manager will combine this function with its emergency coordination roles. The Emergency Management Team will therefore be the same as the Emergency Coordination Teams.

Where Queensland Health undertakes this function, the Emergency Management Team structure and composition will be in accordance with the 'Queensland Health protocol for the management of major drinking water health-related incidents'. The team will include senior representatives from the Water Grid.

Whitni the State Disaster Management Group undertakes this function, it will be in accordance with the State Disaster Absorpment Plon.

The Emergency Management Team may draw upon the Interagency Operations Team for specialist advice. If required.

# **Interagency Operations Team**

The Interagency Operations Team is an independent expert reference panel assembled by the Emergency Management Team to provide technical or specialist advice and recommendations on any aspect of managing a given emergency, for example, specialist chemicals advice. It will essentially contain skills that are not readily available from within the Water Grid. Its size and composition are not fixed, as these will be determined for each event in view of the technical knowledge or expertise required. The Emergency Manager will designate a Grid Participant or external agency staff member to be the manager of the Interagency Operations Team.

Table 10: Indicative Interagency Operations Team meeting requirements

Level	Frequency	Format
1, 2, Alert	Interagency Operations Team not required	
	<ul> <li>If Emergency Management Team         establishes Interagency Operations Team</li></ul>	Teleconference
4 and 5	Minimum once daily     Increase frequency, as required	<ul> <li>Daily in-person meeting at combined Emergency Response Team location/incident room</li> <li>Additional meetings may be by teleconference or in person as appropriate</li> </ul>

### Location

Unless the Emergency Manager advises otherwise, the emergency response function teams will be located as follows:

Table 11: Normal emergency response function team locations

Function team	Location
Incident management	As directed by impacted Grid Participants
Technical coordination	As directed by the Deputy Emergency Manager – Operations. It will be an appropriate location to achieve efficient situational awareness
Communications coordination	Water Grid Manager's office
A. II. J.	Level 15, 53 Albert Street, Brisbane
Emergency management	Water Grid Manager's incident room
	Level 15, 53 Albert Street, Brisbane
Interagency Operations Team	As directed by the Emergency Manager

### Continuous reassessment

Risk assessment needs to be a continuous process throughout the entire emergency response.

The initial incident severity classification may require adjustment as the incident and its wider impacts evolve and are better understood.

As the emergency is notified, and the Emergency Management Team and Emergency Coordination Teams are mobilised, each should reassess the risk classification in view of their different perspectives and expertise. For example, Queensland Health will be the lead agency for major drinking water health-related incidents, and will use health risk assessment tools to review the severity level classification.

Reassessment should also follow milestones in managing the emergency and recovery, or as often as deemed necessary, depending on the nature of the incident.



### Tool/resource

- Refer to Table 3: Incident severity classification levels.
- Refer to 'Queensland Health protocol for the management of major drinking water health-related incidents'.

### Escalation

The escalation of an incident through to Level 5 is based on a combination of factors including:

- the consequence of the incident to:
  - water quality
  - water assets
  - water quantity
  - security
  - public health
  - the environment
  - public confidence
- the ability of the deployed people and resources to manage the consequence.

The appropriate person within a Grid Participant, e.g. Grid Participant Duty Manager, has the authority to escalate an incident to a higher level and send appropriate notification to the Water Grid Manager corresponding to the escalation. The Water Grid Manager reserves an overriding right to

### Prompts for the escalation to a higher level include:

- actual or potential impact on the Water Grid, its Grid Customers, community and environment is more widespread
- the available people and resources associated with the original incident severity level are inadequate to manage the incident
- more information is known about the incident, justifying a reclassification
- an upward trending pattern of the initial incident (i.e. a domino effect), which may result in the escalation of the incident
- emergency services are required to assist
- water quality issues require notification to the Queensland Water Commission, Department of Environment and Resource Management and/or Queensland Health
- potential for secondary issues to develop and be more damaging than the original incident
- · widespread attention by the media, regulators, or Members of Parliament
- potential for major asset damage or loss.

Ψ.	Action checklist – have you…☑	
The state of the s	mobilised the Grid Participant's Incident Management Team as per its internal Emergency Response Plan?	
•	mobilised the Technical and Communications Coordination Teams?	
VIEW IN THE COLVERS OF THE COLVER OF	determined the 'Emergency Manager' and mobilised its emergency command structure?	
•	activated the Emergency Management Team?	
AND THE PROPERTY OF THE PROPER	convened an Interagency Operations Team, if required?	
· · · · · · · · · · · · · · · · · · ·	begun the process of continuous risk reassessment, drawing on specialised expertise as appropriate?	



# Manage the emergency



# Snapshot: Manage the emergency

Actions to eliminate the immediate risk to Water Grid operations:

- Manage the incident at asset/site level.
- Coordinate the emergency at whole-of-Grid level.
- Implement communications protocols.

Refer to the emergency response outline roadmap provided at Attachment B.

# Incident management

Impacted Grid Participants are responsible for carrying out incident management in accordance with their internal emergency response plans and operating protocols.



### Tool/resource

- See (Command and control functions' for a description of the 'incident management' role.
- Refer to Grid Participants' internal emergency response plans and operating protocols.

# **Emergency coordination**

The Water Grid Manager is responsible for establishing the Technical and Communications Coordination Teams. A range of coordination activities will be required to facilitate the total emergency response and to ensure whole-of-Grid operations maintain supply (as distinct from managing the incident at the entity or asset level).

These coordination activities include:

- liaison between Grid Participants and other interested agencies
- facilitating resource sharing among Grid Participants
- seeking and sharing additional expert advice
- assisting the Emergency Manager, when this function has been transferred to another agency (see ' Command and control – Function ownership')
- coordinating and preparing key communications (both internal and external)
- issuing Grid Instructions and Emergency Operating Instructions, as necessary.

For most emergencies, the Water Grid Manager will combine the emergency coordination and emergency management functions. However, when the emergency management function is transferred to another agency, its associated activities, including a range of communication activities. are transformé with it.

# Liaison and resource sharing

The Water Grid Manager provides a single point of contact and clearing house for information across all interested parties in the emergency response. This simplifies liaison processes, prevents confusion and ensures information ends up where it is needed.

Typical examples of this liaison include:

- among Grid Participants
- with State agencies
- with Federal agencies (e.g. Department of the Environment, Water, Heritage and the Arts; National Water Commission)
- with Emergency Services (see Figure 2: Water Grid emergency response hierarchy and the Queensland Disaster Management System).

The Water Grid Manager also acts as a central point for sharing or coordinating a variety of resources, such as:

- sharing plans and tools among Grid Participants
- coordinating and providing mutual assistance
- solving short-term staff and equipment shortages for incident management by sourcing loans from other Grid Participants.

# Major drinking water health-related emergencies

For major drinking water health-related emergencies, Queensland Health will take the Emergency Manager role. In this case, the Water Grid Manager's coordination function will involve supporting Queensland Health, including:

- providing senior representation on the Emergency Management Team
- · providing or sourcing expertise for the Health Reference Panel, if necessary
- seconding staff to the Interagency Operations Team to act on the agreed strategy
- coordinating the environmental investigation with the relevant Grid Participants
- providing and coordinating logistics support, as required
- giving full, proactive cooperation in general.



### Tool/resource

Refer to 'Queensland Health protocol for the management of major drinking water health-related incidents'.

# Whole-of-Grid operations

### **Amendments to Grid Instructions**

Under section 4.15 of the Market Rules, the Water Grid Manager can issue new Grid Instructions:

- when there is a change in circumstances such as distribution and storage capacity
- for any reason that the Water Grid Manager, at its discretion, considers appropriate.

During emergencies, the Water Grid Manager is to perform an assessment of the impact upon security of supply and ability to meet Grid Customer demand, and issue new Grid Instructions as necessary. To make this assessment Grid Participants may be required to make arrangements to provide the Water Grid Manager with access to timely, accurate and verified information.

### Water Supply Emergency Declarations and Emergency Operating Instructions

A Water Supply Emergency can be declared by the Minister responsible for Chapter 2, Part 2, Division 2A of the *Water Act 2000* if the Minister is satisfied there is a water supply emergency or that one is developing. A water supply emergency is an event or situation where there is a demonstrably serious risk of not being able to meet part of the State's essential water supply needs. The following examples of some potential situations are included in the *Water Act 2000*:

- failure of a large part of water supply, treatment or distribution infrastructure
- extended severe drought conditions
- water storage used for essential water supply needs becoming unfit for use due to contamination.

An incident of such a magnitude to prompt the making of a Water Supply Emergency Declaration will likely be a Level 4 or 5 under this Emergency Response Plan.

When the Minister declares a Water Supply Emergency, the Water Grid Manager may issue Emergency Operating Instructions. Emergency Operating Instructions issued under this section are to be published in a manner determined by the Water Grid Manager and are to be issued to the Grid Participants they affect. The Water Grid Manager may provide a copy of the Emergency Operating Instructions to other Grid Participants and any other entity the Water Grid Manager considers appropriate.

The Water Grid Manager will determine the timeframe over which the Emergency Operating Instructions apply, which will be subject to the type of incident taking place.

The Water Grid Manager can amend Emergency Operating Instructions if it judges necessary. The frequency of these amendments will depend on the nature of the incident. For example, a major asset failure may necessitate frequent amendments to Emergency Operating Instructions, whereas a drought emergency would probably not require amendments to be made so frequently.



Refer to the Market Bules, sections 4.15 and 4.23-4.24.

## Communication

### Overview

Effective communication plays a major part in successfully managing emergencies. All interested parties in the emergency response need to focus on providing and supporting communications which:

- are timely
- are up-to-date
- are accurate
- include a caution or indication of confidence based on the completeness of the information available
- assist the overall emergency management effort
- create a single voice, to avoid confusion and conflicting messages
- maintain public and stakeholder confidence
- do not adversely affect insurance cover, where possible.

Any information advised to the Emergency Management Team for use in briefing the Minister's office must be authorised by the Grid Participant's CEO.

The Emergency Management Team is responsible for managing most communication functions. The Emergency Management Team will use the Communications Coordination Team in supporting this role. Refer to '® Establish command and control' for an outline of the emergency management role. For a diagram of the emergency management communication process, refer to Attachment C: Communication workflow.

For incidents not deemed an emergency under this Plan, and where a State-owned Grid Participant is involved, all communication activities must be coordinated through the Communications Unit.



### Tool/resource

- Refer to Attachment C: Communication workflow.
- For Level 1 and 2 incident communications, refer to the Communications Unit protocols.
- A Sample Situation Report (SITREP) template is provided at Attachment H. This is available as a separate Word file on request from <u>emergency</u>
- Refer to Attachment I: Informal Ministerial briefing template.

'Internal' communication activities

Among members of the Water Grid and Government stakeholders.

Table 12: 'Internal' communication roles

Level	Communication	Level Communication Incident Management Team [Impacted Grid Participant/s]	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other) <sup>5</sup>
1-2	Notification	Notify internal key stakeholders as required, e.g. CEO, Mayor, Board Notify other impacted Grid Participant/s	No involvement	No involvement
	Stakeholder briefings	n discretion		# # # # # # # # # # # # # # # # # # #
	Liaison/support	Liaise with other impacted Grid Participant/s	No involvement	No involvement
Alen	Notification	Notify internal key stakeholders as required, e.g. CEO, Mayor, Board Notify other impacted Grid Participant/s. Notify Water Grid Manager Notify Office of the Water Supply Regulator, if required	Water Grid Manager Duty Manager to notify Minister's office (use Attachment I template)	Water Grid Manager Duty Manager to notify Minister's office (use Attachment I template)
	Stakeholder briefings	Manage internal stakeholders at own discretion	No involvement	No involvement
	Liaison/support	Liaise with other impacted Grid Participant/s	No involvement	No involvement

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Level	Communication	Level Communication Incident Management Team (Impacted Grid Participant/s)	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other) <sup>5</sup>
	Notification	Notify Water Grid Manager Notify Office of the Water Supply Regulator, if required Notify internal key stakeholders as required, e.g. CEO, Mayor, Board  Confirm with the Water Grid Manager which stakeholders have been notified	Notify other relevant stakeholders, as appropriate:  Water Grid Manager CEO  Water Grid Manager Soffice  Water Grid Manager Board  Water Grid Manager Board  Queensland Water Commission  Pepartment of Environment and Resource Management  Premier's Department  Emergency Services	
	Stakeholder briefings	Proactively provide information to Emergency Manager/Emergency Coordinator to enable preparation of briefings Assist Emergency Manager Teams in preparation and approval of briefings. Forward approved briefings to internal stakeholders as required, e.g. Grid Participant senior management, CEO, Mayor, Board Do not issue briefings independent of Emergency Manager/Emergency Coordinator	Proactively provide information to Emergency Manager to enable preparation of briefings Assist Emergency Manager in preparation and approval of briefings Forward approved briefings to internal stakeholders, as required Do not issue briefings independent of Emergency Manager	Manage preparation and approval of briefings, as appropriate (including SITREPs) Issue briefings Respond to enquiries about briefings and other stakeholder enquiries Unless another organisation takes the Emergency Manager role, the Water Grid Manager's responsible Minister has final approval of briefings, etc.
	Liaison/support	Proactively provide information and support to the Emergency Management Teams Provide SITREPs to summarise available information, as requested by the Emergency Manager/Emergency Coordinator	Proactively provide information and support to the Emergency Manager Coordinate liaison and communications support across the emergency response teams	Manage preparation and approval of briefings, as appropriate (including SITREPs)

<sup>&</sup>lt;sup>5</sup> See ' Command and control - Function ownership'

4

'External' communication activities

Directed at the public and stakeholders outside Water Grid.

Table 13: 'External' communication roles

evel	Communication	Level Communication Distribution Service Providers Incident Management Team (Impacted Grid Participant/s) #	Communications Coordination Team Emergency Management Team (Water Grid Manager) # (Water Grid Manager or other)	Emergency Management Team (Water Grid Manager or other) <sup>6</sup>
1–2	Strategy and messaging	Formulate any appropriate communications strategy messaging at their discretion	Provide whole-of-Grid messaging, if required	No involvement
	Public face	person	No involvement	No involvement
	Media management Public information and enquiries	Manage media at their own discretion Respond to media/public enquiries May only comment on the incident as it relates to their assets No comment to be made on whole-of-Grid issues	Manage comments on the Water Grid, if required	No involvement
Alert	Strategy and messaging	Formulate any appropriate communications strategy messaging at their discretion	Provide whole-of-Grid messaging, if required	No involvement
	Public face	Designate spokesperson	No involvement	No involvement
	Media management Public information and enquiries	Manage media at their own discretion Respond to media/public enquiries May only comment on the incident as it relates to their assets No comment to be made on whole-of-Grid issues	Manage comments on the Water Grid, if required	No involvement

# All SEQ Water Grid communication activities for the State-owned entities are coordinated through the SEQ Water Grid Communications Unit, including Levels 1, 2 and Alert level incidents.

Level Communication	Distribution Service Providers Incident Management Team (Impacted Grid Participant/s) #	Communications Coordination Team (Water Grid Manager) #	Emergency Management Team (Water Grid Manager or other) <sup>6</sup>
messaging	Work with the Emergency Manager to develop the communications strategy for the emergency response, and key messages for inclusion across all communications	Work with the Emergency Manager to develop the communications strategy for the emergency response, and key messages for inclusion across all communications	Conduct risk assessment and incident verification Manage development of a communications strategy for the emergency response, and key messages for all communications Unless another organisation takes the Emergency Manager role, the Water Grid Manager's responsible Minister has final approval of messaging, etc.
Public face	Support spokesperson, as requested Do not present public face independent of Emergency Manager	Support spokesperson, as requested Do not present public face independent of Emergency Manager	Designate spokesperson
Media management Public information Public enquiries	Assist Emergency Manager in preparation and approval of media releases and other public information. Disseminate finalised and approved mediareleases, and other public information. Forward media/public enquiries to Emergency Manager. Do not issue releases or information independent of Emergency Manager.	Assist Emergency Manager in preparation and approval of media releases and other public information Disseminate finalised and approved media releases, and other public information Forward media/public enquiries to Emergency Manager Do not issue releases or information independent of Emergency Manager	Manage preparation and approval of media releases and other public information, as appropriate Issue media releases (initial statement and further releases as appropriate) and other public information (Grid Participant websites, call centres, etc.)  Respond to media/public enquiries Unless another organisation takes the Emergency Manager role, the Water Grid Manager's responsible Minister has final approval of media statements, etc.

See ' Command and control - Function ownership'

# All SEQ Water Grid communication activities for the State-owned entities are coordinated through the SEQ Water Grid Communications Unit, including Levels 1, 2 and Alert level incidents.

3.00		
9	Action checklist – have you	
•	verified the incident level?	
•	continually reassessed risk, command and control, and interagency communications?	
•	implemented incident management at the asset/site level as per the Grid Participant's internal Emergency Response Plan and operating protocols?	
•	established effective liaison among all intere parties in the emergency response and with stakeholders?	
•	used the Water Grid Manager to coordinate additional resources from other Grid Participants?	
•	for major health-related incidents, committe the necessary support to Queensland Health	
•	modelled the impacts on security of supply a issued new Grid Instructions, if required?	nd 🗌
•	issued Emergency Operating Instructions, if required?	
•	briefed relevant key stakeholders and established a schedule for ongoing updates?	
•	issued an approved holding initial statement the media?	to 🗌
•	developed a communication strategy and key messages for this incident?	/ 🗆
•	established who will be the public face/ spokesperson for the response?	
•	developed further media statements as appropriate?	
•	developed and disseminated further public information releases, e.g. for publication via Grid Participant websites and call centres?	



# Manage the recovery



# Snapshot: Manage the recovery

Actions to return Water Grid operations to normal:

- Agree recovery plan and objectives.
- Recover asset and restore full service/product delivery.
- Implement close-out communications protocols.

Refer to the emergency response outline roadmap provided at Attachment B.

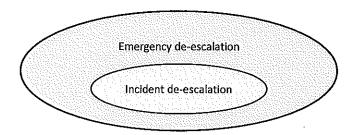
# Context

Recovery begins immediately once an incident has been contained. The focus is on maintaining continuity of operations while restoring the Water Grid to normal status. The Water Grid Manager's 'strategic Water Grid management' function provides direction as to the approach to be applied.

### De-escalation

There are two elements of de-escalation in the emergency response context:

Figure 4: De-escalation



As shown, incident de-escalation is a sub-set of emergency de-escalation.

Incident de-escalation relates to incident management, and the status of the physical event. The impacted Grid Participant is therefore responsible for incident de-escalation. Each Grid Participant is to have a procedure which details the process to close-out an incident once it has been rectified.

Emergency de-escalation takes into account a broader range of factors including emergency coordination and management, which may continue well after the incident that caused the emergency has be rectified. As such, it is possible that the emergency may stay ongoing after the Grid Participant has de-escalated their incident. As a result, only the Emergency Manager can de-escalate the Water Grid emergency.

# Roles and responsibilities

Action		Technical Coordination Team	Communications Coordination Team (Water Grid Manager)	Emergency Management Team (Water Grid Manager or other)
Agree recovery plan and objectives	•	•	•	•
Recover asset	•			
Issue Grid Instructions, as necessary		•		
Implement close-out communications protocols			•	•
Close-out incident	•			
Complete Incident Close-out Report	•		**************************************	
Close-out emergency				•

See ' Command and control - Function ownership'

# Incident Manager (Grid Participant/s)

Grid Participants are responsible for managing the recovery of their assets, services and/or products in accordance with the agreed recovery objectives and the Water Grid Manager's Grid Instructions. Grid Participants are also responsible for providing information and resources to the Emergency Management Team and Emergency Coordination Teams in order to assist the whole-of-Grid recovery effort.



### Tool/resource

Refer to the Grid Participant's internal Emergency Response Plan and operating protocols for asset recovery processes.

### **Incident Close-out Report**

For all Alerts, Level 3, 4 and 5 incidents, the impacted Grid Participant/s must complete the Incident Close-out Report provided at Attachment J, including the results of any investigation and rectification procedures performed, and copy to the Water Grid Manager (and Emergency Manager, if this is not the Water Grid Manager).



### Tool/resource

A copy of the Incident Close-out Report is provided at Attachment I. This is also available as a separate Word file on request from emissions.

### Office of the Water Supply Regulator

For all incidents that have required the Grid Participant to submit Part A of the form 'Drinking water quality: incident reporting' to the Office of the Water Supply Regulator, the Grid Participant should also submit Part B of the form on close-out in addition to the Water Grid Incident Close-out Report sent to the Water Grid Manager.



### Tool/resource

Refer to the 'Drinking water quality: incident reporting' form available at <a href="https://www.derm.gld.gov.au">www.derm.gld.gov.au</a>.

# **Emergency Coordination Teams (Water Grid Manager)**

The Emergency Coordination Teams assist the Emergency Management Team in coordinating the whole-of-Grid recovery process, based on recovery objectives and subsequent priority of work provided by the Emergency Management Team.

The Emergency Coordination Teams must work with Grid Participants to determine the most effective method of implementing the recovery objectives. The Water Grid Manager will then issue Grid Instructions to Grid Participants, if required, in accordance with the recovery priorities and at a frequency which assists the recovery.

# Emergency Management Team (Water Grid Manager or other)

The Emergency Management Team is responsible for directing the whole-of-Grid recovery process. This is primarily achieved by outlining the recovery objectives and the subsequent priority of work.

This process may involve input and assistance from a number of other government departments and stakeholders such as:

- Grid Participants
- Queensland Treasury
- Department of Community Safety (Emergency Services)
- Department of Premier and Cabinet
- Department of Infrastructure and Planning
- Grid Customers

- Queensland Health
- Department of Employment, Economic Development and Innovation
- Queensland Water Commission
- Department of Environment and Resource Management.

### Communications and media

The Emergency Management Team is responsible for managing recovery communications across the Grid Participants and to external stakeholders such as Grid Customers and relevant parts of government. The Emergency Management Team is also responsible for issuing a close-out statement/media release, if appropriate.



### Total/resource

Refer to **O** 'Manage the emergency' for media release protocols.

<b>y</b>	Action checklist – have you	
•	established the recovery objectives?	
•	recovered the asset?	
•	issued Grid Instructions, if required, to achieve whole-of-Grid recovery?	
•	issued an approved close-out statement to the media, if appropriate?	
•	completed an Incident Close-out Report and copied it to the Water Grid Manager (and other Emergency Manager) (Attachment J)?	
•	Submitted Part B of the Office of the Water Supply Regulator form 'Drinking water quality: incident reporting'?	

# **6** Improvement actions



# **Snapshot: Improvement actions**

Actions to improve future Water Grid operations:

- Debrief following incident close-out.
- Draft Post-emergency Report.
- Update Risk Registers.

Refer to the emergency response outline roadmap provided at Attachment B.

# Debriefing

The Emergency Manager will decide if a formal debriefing process is to be carried out, based on the nature of the incident.

The following table outlines responsibilities for carrying out debriefings following incident close-out.

Table 14: Debriefing responsibilities

Level	Incident Manager (Impacted Grid Participant)	Emergency Manager (Water Grid Manager or other) <sup>8</sup>
1,2 and Alert	Refer to Grid Participant's internal Emergency Response Plan	No involvement
3, 4 and 5	Carry out 'hot' debrief – informal debriefing which must occur as soon as practicable following the event to capture immediate learning's and details	Water Grid Manager to facilitate a 'cold' debrief including all entities involved in the emergency response in order to:
		<ul> <li>carry out a root cause analysis</li> <li>capture and disseminate experiences and lessons learnt throughout the incident</li> </ul>
	······································	enable process improvements and modifications

See ' Command and control – Function ownership'

Debriefings must be fully documented, with copies of the minutes distributed to all entities involved. Attendees will need to bring copies of all documentation associated with the incident, such as notification forms, logs, SITREPs, briefings, media releases, correspondence, photographs, etc.



### Tool/resource

- Refer to debriefing procedures in Grid Participant internal emergency response plans.
- A Debriefing minutes template is provided at Attachment K. This is also available as a separate Word file on request from emergency

# Post-emergency Report

The Post-emergency Report functions as a summary of information and feedback on an emergency and as a cover form for the file of associated documentation. It is a vehicle for information consolidation, analysis and formalised recommendations.

It should be completed by the Emergency Manager or Emergency Coordinator following a thorough debriefing process.

The Emergency Manager/Emergency Coordinator will distribute copies of the Post-emergency Report to all entities involved in the emergency response.



### Tool/resource

Refer to the Post-emergency Report template provided at Attachment L.

# Risk Register

Recommendations arising from the debriefing process and Post-emergency Report must be forwarded to Grid Participant Risk Managers for inclusion in the entities' Risk Registers, as appropriate.

The impacted Grid Participant/s are responsible for incorporating recommended actions addressing their own assets and systems. The Water Grid Manager is responsible for incorporating recommendations which address:

- · whole-of-Grid systems and continuous improvement
- learning's from the experience that have value for all Grid Participants, and should be shared with others not involved in the incident.

Following risk assessment in accordance with the Grid Participants' internal risk management plans, recommendations and mitigations will flow through to update operational documentation such as:

- operational procedures
- training schedules
- water quality improvement plans
- asset improvement plans.



# Tool/resource

- Refer to Grid Participant and Water Grid Manager Risk Registers and risk management plans.
- Refer to the Water Grid Manager's Workforce Capability Strategy.

1	the state of			
		Action checklist – have you☑		
30mmman20	•	carried out a 'hot' debrief?	12 15 12 12 12 12 12 12 12 12 12 12 12 12 12	
7X5000000000000000000000000000000000000	•	carried out a 'cold' debrief (Attachment K)?		
	•	completed a Post-emergency Report (Attachment L)?		
***************************************	•	forwarded recommendations for inclusion in Risk Registers?		
L	NO ANTANIDANI			

### Attachment A: Emergency contact list

Grid Participants are to provide an update of their contact list to the Water Grid Manager as changes occur, and as a minimum, on the first working day in February, May, August and November, whether or not any changes have been made.

### Grid Participant – first priority contacts

Entity	Contact person	Role	Contact details
SEQ Water Grid Manager	Duty Manager (24/7)	(first point of contact for incidents)	
LinkWater	Control Room (24/7)	(first point of contact for incidents)	
WaterSecure	Philip Surtees	Senior Operations Manager (first point of contact for incidents)	
Seqwater	David Roberts	Principal Coordinator, Incident and Emergency Management (first point of contact for incidents)	
Unitywater	Duty Shift Officer	Network Operations Control Room (South) - MBRC (first point of contact for incidents)	
Queensland Urban Utilities	Control Room Operator	East Operations Control Room Operates 24/7 (first point of contact for incidents)	
Allconnex Water	Paul Gear	Acting Group Manager Policy & Systems (first point of contact for incidents)	

### Grid Participant – additional contacts

Entity	Contact person	Role	Contact details
SEQ Water Grid Manager	Barry Dennien	Chief Executive Officer	
	Scott Denner	Director, Risk & Technology	
	Dan Spiller	Director, Operations	
	Lee Hutchison	Risk & Emergency Manager	
	Brett Spink	Risk Program Manager	
	Media Duty Manager		
LinkWater	Duty General Manager		
	Andrew Moir	General Manager Operational Services	
	Stacey Renouf	Corporate Communications Manager	
	Call Centre		
WaterSecure	Keith Davies	CEO	
	Paul Rees	Manager Communications and External Relations	
	Matt Service	Operations Manager Purified Recycled Water	
	Sean McCagh	Operations Manager Desal	

Entity	Contact person	Role	Contact details
	Call Centre	Western Corridor Recycled Water	
ининия политический политический политический политический политический политический политический политический	Call Centre	Gold Coast Desalination Plant	
Seqwater	Jim Pruss	Executive General Manager Operations	
	Stan Stevenson	Coastal Operations Manager	
	Brett Myatt	Central Operations Manager	
	Arran Canning	Water Quality Product Manager	
	Incident Management Hotline		
Unitywater			
Southern Region (Moreton Bay Regional	Graeme Arthy	Principal Engineer Network Control	
Council Area)	Robert Stringfellow	Senior Manager Network Operations	
	Barry Holcroft	Executive Manager Operations South	
Northern Region (Sunshine Coast	Duty Shift Officer	Network Operations Control Room (North) (secondary point of contact for incidents)	
Regional Council Area)	Michael Doherty	Network Operations  Manager	
	Peter Willey	Manager Operations	

Entity	Contact person	Role	Contact details
	Gary Sabburg	Executive Manager Operations North	
Head Quarters	Call Centre	Customer Service Team	
	Helen Mohr	Manager Communications & Marketing	
	Dave Archbold	Business Resilience Coordinator	
	Martin Doré	Manager Business Sustainability	
	Jon Black	CEO	
	Peter Scott	CFO & Dep. CEO	
Queensland	<u>i</u> Urban Utilities		
Queensland Urban Utilities	West Duty Officer	West Control Room (secondary point of contact for incidents)	
(QUU)	Media Duty Manager	24/7 Communications and Media Duty Officer	
	Manager - Source Control & Product Quality	Water quality contact	
	Robin Lewis	COO	
	Noel Faulkner	CEO	

Entity	Contact person Role Contact details
	Email contact for East QUU incident Management room (when activated)  quusde-incidentroom  Email contact for West QUU incident Management room (when activated)  quu.west.imte  Email contact for West QUU Emergency Management room (when activated)  QUU.EMTE  THESE EMAILS ARE ONLY MONITORED WHEN AN INCIDENT OR EMERGENCY HAS BEEN DECLARED AND THE ROOM/S ACTIVATED

### **Allconnex Water**

Allconnex W	atei		
Gold Coast	Duty Manager	On-call Incident Manager	
District	Duty Operator	24hr Call Centre (secondary point of contact for incidents)	
	Dick Went	District Manager	
Logan District	Duty Operator	24hr Call Centre	
	Daryl Ross	District Manager	
	Palith Siriwardana	Operations Manager	
Redland District	Gary Soutar	District Manager	
	Brad Taylor	Manager Treatment Operations	
	Kevin McGuire	Manager Reticulations Operations	
	Sherryn Filip	Customer Relations Officer  (for communications/ media)	

### Other key stakeholder contacts

Entity	Contact person	Role	Contact details
Emergency Ser		***************************************	
Police, Ambula	nce, rire – vou	Y	
Emergency Management Queensland	State Disaster Coordination Centre	Watch Desk Officer	
Queensland	Head Office		
Fire and Rescue Service	Media Liaison		
Chemical Hazards and Emergency Management (CHEM)			
Queensland	Head Office		
Police Service	Counter Terrorism Coordination Unit	2	
	Water Police		
	Media and Public Affairs Branch		
Queensland Go		eta anterioren arribarioren errorren errorren errorren errorren errorren errorren errorren errorren errorren e	

### Ministers' offices

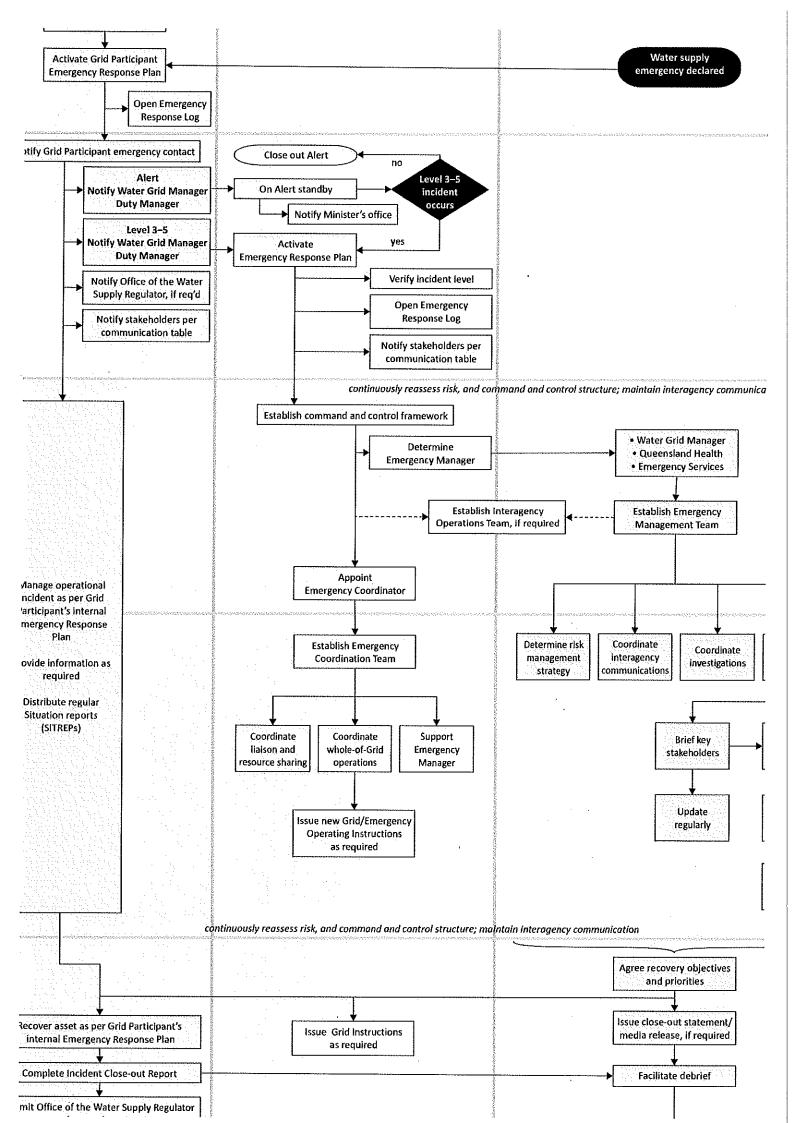
Do not contact Ministers' offices directly other than that of the Minister for Natural Resources, Mines and Energy—who will contact the Premier and other Ministers as necessary.

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Minister for	Lance McCallum	Principal Advisor	
Natural		# *** *** *** *** *** *** *** *** *** *	
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Energy	David Robertson	Media Advisor	
	David Hobertson	111001011011	
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	Tim Watts	Policy Advisor	

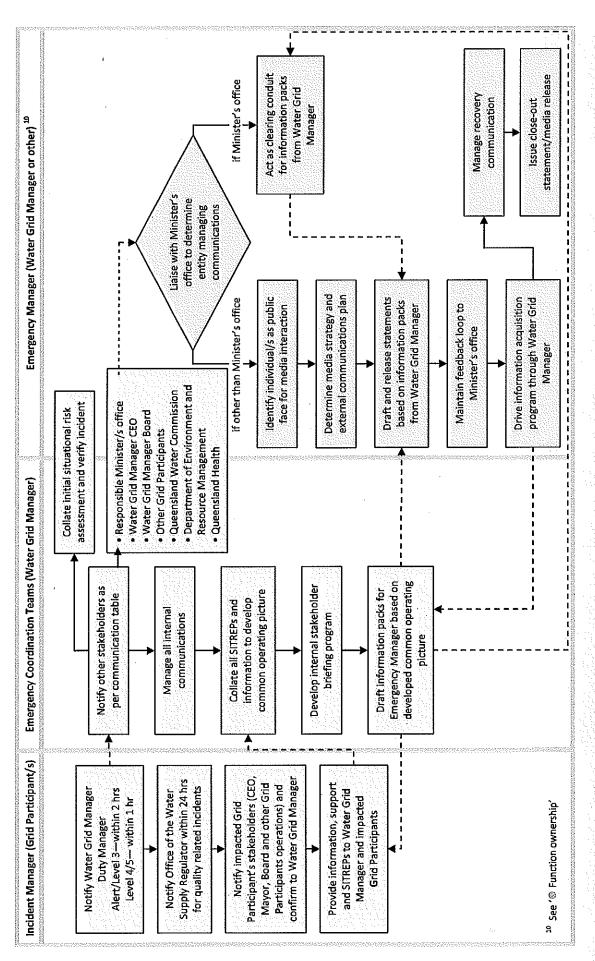
Entity	Contact person	Role	Contact details
Departments			
Department of Environment and Resource	Debbie Best	Office of the Deputy Director-General Water and Catchment Services	
Management	Greg Oliver	General Manager, Urban Water	
	Kerry Waters	General Manager, Client Communications and Information	
	Drinking Water Incidents	Office of Water Supply Regulator	
	Recycled Water Incidents	Office of Water Supply Regulator	
	Peter Allen	Office of Water Supply Regulator Director, Dam Safety	
	EPA Hotline	Environmental Protection Agency (for reporting wildlife emergencies and pollution incidents)	(24hrs)
Queensland Water Commission	Karen Waldman	Executive Director	
Queensland Police Service Counter Terrorism Strategic Policy Branch	Peter Hallinan (Stakeholder Engagement)		
Queensland Police Service Security	Adrian Pate	Principal Policy and Programs Officer	
Planning and Coordination			
Queensland Police Service			
Security Intelligence Branch			

Entity	Contact person	Role	Contact details
Treasury	Ken Sedgwick	Assistant Under Treasurer	
	Kellie Reeves	Treasury Advisor	
Queensland Health	Dr Greg Jackson	Water Quality Unit Environmental Health Branch Health Protection Directorate	
	Water Quality Unit Emergency Contact		
*************************	Forensic and Scientific Services	(Analytical support, water- related health problems)	
Department of Employment, Economic Development and Innovation	WHS Inspector and Workplace Accident Notification	Workplace Health and Safety	(24hrs)
Department of Transport and Main Roads	Steve Hallam	Transport Senior Advisor, Emergency Management	
	Brian Balwin	Main Roads Senior Advisor, Critical Incident Coordination	

Grid Custome	'S		
CS Energy	David Christy	Coal and Water Resources Manager	
	Swanbank Power Station Shift Supervisor		
	Steve Watterston	Swanbank Power Station Operations Superintendent	
Tarong Energy Corporation	Dave Barram	Acting Manager Operations	
	Jay Merritt	Senior Communications Advisor	
	Tim Loth	Community Relations Manager	
Toowoomba Regional	Kevin Flanagan	Director Water Services	
Council	Alan Kleinschmidt	Manager Water Operations	
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## Attachment C: Communication workflow



### 99

# Attachment D: Grid Participant Emergency Response Plan approval requirements

These approval requirements will be used by the Water Grid Manager to ensure Grid Participants' internal Emergency Response Plans are consistent with and meet the objectives of the SEQ Water Grid Emergency Response Plan. When submitting plans for approval, Grid Participants are to include this table with a note giving the page/s of the plans on which each requirement is met.

Pg/s in Plan	***************************************	,	
To be included in Grid Participant emergency response plans st practice) Requirements (compulsory)		<ul> <li>A Testing and Review Plan aligned with that detailed on page 7 of the SEQ Water Grid Emergency Response Plan is to be included.</li> <li>A Training Plan aligned with that detailed on page 8 of the SEQ Water Grid Emergency Response Plan is to be included.</li> <li>The general responsibilities of Grid Participants detailed on page 14 of the SEQ Water Grid Emergency Response Plan are to be included.</li> </ul>	<ul> <li>Table 3 (Incident severity classification levels) is to be reproduced verbatim.</li> <li>The trigger levels contained within  must be reproduced, with Grid Participant information for action on Level 1, 2 and Alert incidents included as appropriate.</li> </ul>
To be included Recommendations (best practice)	To facilitate effective interaction during an emergency, Grid Participant emergency response plans should mirror the six-step process detailed in the SEQ Water Grid Emergency Response Plan.		
Components	General	Governance and policy	<ul><li>Identify and assess incident severity</li></ul>
Market Rules reference	4.30 (a) (i) [provide] 'comments regarding the extent (if any) to which the draft Grid Service Provider Emergency Response Plan or Distribution Service Provider Emergency Response Plan is inconsistent with, or does not	reasonably meet the objectives of the SEQ Water Grid Emergency Response Plan'.	

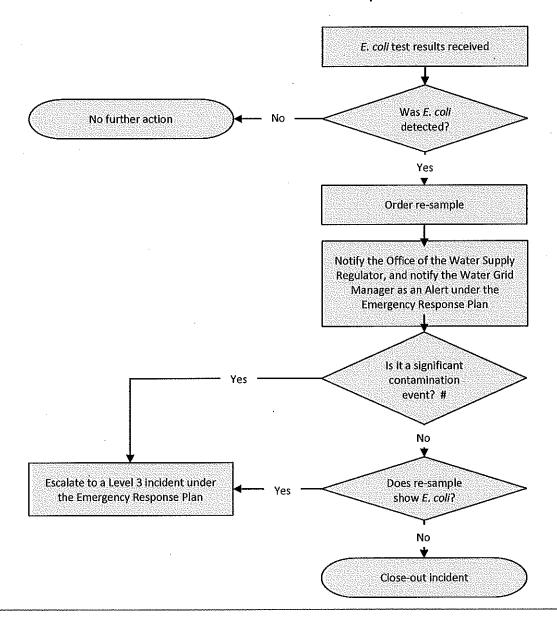
Plan
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Emergency F
<u> </u>
Water G
SEQ

Pg/s in Plan												19414444444
To be included in Grid Participant emergency response plans sst practice)	Table 4 (Notification responsibilities) is to be reproduced with the Grid Participant emergency contacts substituted as appropriate.	Contact details for the Water Grid Manager Duty Manager and Media Duty Manager to be reproduced within the body of the Plan in the section on notifications as well as in the contacts list in the annexes to the Plan.	A key stakeholder notification table, similar to Table 5 (Key stakeholder notification) but specific to the Grid Participant is to be included.	The Plan is to specify that records are to be kept in accordance with the instruction on record keeping in $^{\odot}$ .	Table 7 (Command and control function responsibilities) is to be reproduced with Grid Participant details inserted as appropriate.	Figure 3 (Emergency Response Team structure) is to be reproduced with Grid Participant details substituted as appropriate.	Table 9 (Function teams membership) is to be reproduced with Grid Participant details inserted as appropriate.	A description of the structure, role and management of the Incident Management Team, the Interagency Operations Team and the Emergency Management Team are to be included and	aligned with the detail in	as to be reproduced with one rathropain details first red as appropriate.	The Plan is to include the continuous reassessment process in $\ensuremath{\mathfrak{S}}$ .	The Plan is to include the escalation process in 🐵.
led in G	•	•	•	•	• .	•	•	•	•	13 1173277777	•	•
Recommendations (be									1111731134444			
Components	Notify				Establish command and control							10 trách 64 of built is trân ar tay bes of each fee a tobar
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		To be included in Grid Participant emergency response plans
Market Kules reterence	components	Recommendations (best practice) Requirements (compulsory)
	© Manage the	<ul> <li>The Plan is to note that incident management is carried out by the Grid Participant.</li> </ul>
	0	<ul> <li>The Plan is to note the emergency coordination functions         carried out by the Water Grid Manager as detailed in .</li> </ul>
		<ul> <li>Table 12 ('Internal' communication roles) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>
		<ul> <li>Table 13 ('External' communication roles) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>
	© Manage the recovery	Incident de-escalation and emergency de-escalation are to be included in the Plan as detailed in ®.
		<ul> <li>The requirement for an Incident Close-out Report as detailed in         is to be included in the Plan.     </li> </ul>
	***************************************	<ul> <li>The role of the Emergency Management Team in managing the recovery as detailed in <sup>®</sup> is to be included in the Plan.</li> </ul>
	(3) Improvement actions	<ul> <li>Table 14 (Debriefing responsibilities) is to be reproduced with Grid Participant details inserted as appropriate.</li> </ul>
		<ul> <li>Post-emergency Report and Risk Register actions as detailed in</li> <li>are to be included in the Plan.</li> </ul>
4.29 (d)	*********	All isolated supply schemes are to be identified in an annex to
[for Distribution Service Providers] 'in the case of Water		the Plan, with a suitable contingency plan for the provision of an alternate water supply detailed for each.
Supply Works constituting	**1>***	
Isolated Supply Schemes,		
alternate water supply'.		

### Attachment E: E. coli Alert escalation process





### # Is it a significant contamination event?

The Water Quality Managers of the reporting Grid Participant and the Water Grid Manager will discuss the initial sample results and determine whether they consider it to be a significant contamination event. The type of questions they will ask to assist this determination will be:

- number of E. coli detected
- historical frequency of detections at the sample point
- any other detections at surrounding sample points
- has the detection occurred at the same time as another event or incident (i.e. asset failure, major storm, disinfection problem)
- is there a known contamination source?

(Where the Water Quality Managers of the Grid Participant and the Water Grid Manager disagree on whether the incident is significant, the higher level will be adopted).

### Attachment F: Chlorine and monochloramine level exemptions

In accordance with the Office of the Water Supply Regulator advice, levels of chlorine and monochloramines that exceed *Australian Drinking Water Guidelines* (2004) health values are not reportable as incidents under this Plan, provided the following conditions are met:

- The exemption only applies to incident reporting for chlorine or monochloramine levels above the Australian Drinking Water Guidelines (2004) found in the water treatment or transmission system, where as an operational practice, dosing of chlorine or monochloramine levels higher than the Australian Drinking Water Guidelines (2004) health value is required to achieve adequate disinfection in the reticulation system.
- The exemption only applies when there is a monitoring point prior to the delivery of water to customers to demonstrate the disinfection values are within *Australian Drinking Water Guidelines* (2004) health value guidelines.
- Where water is supplied from a transmission system owned by one Drinking Water Service
  Provider to a reticulation system owned by another provider, the owner of the reticulation
  system must be aware of the practice.
- Drinking water service providers must continue to report on chlorine or monochloramine levels above the *Australian Drinking Water Guidelines* (2004) in a reticulation system.
- The Office of the Water Supply Regulator recommends that all providers who choose to dose
  chlorine or monochloramine at levels higher than the Australian Drinking Water Guidelines
  (2004) health values in order to achieve adequate disinfection in the reticulation system consider
  the risks of disinfection by-products being formed and include these in their regular monitoring
  program, if appropriate.



### Tool/resource

Refer to the following correspondence:

- Uwins, Heather (Office of the Water Supply Regulator) 16 June 2009, letter to Andrew Moir (LinkWater), 'Re: Incident reporting: monochloramine levels in transmission systems'.
- Hortz, Michael (LinkWater) 22 June 2009, letter to SEQ Water Grid Manager.
- Dennien, Barry (SEQ Water Grid Manager) 26 June 2009, letter to Michael Hortz (LinkWater).

### Attachment G: Incident Notification Form

### Incident Notification Form: standard format

To be completed and forwarded to the SEQ Water Grid Manager via email: emergency(

ladida di numbar	2010. vvv	*******************		*************
Incident number	2010-xxx	***************************************		
Reporting organisation		***************		
Date	**************************************	**********************		***************************************
Time	***************************************	*********************		
Location	Site	64++22 <b>4</b> 2>94462++6>+63+63+63+63		
	Address	1311121191113111741711711711		1>-1439+1445194394
Reported by	ondelokenlendiona)etssöxbonase	************************************		************
Nature of incident/e	emergency			
Water quality	*************************		Health and safety of employees or public	
Water asset failure			Environment	
Water quantity	*******************************		Public reassurance	
Security or natural disaste	 er		Other (please specify)	
(what happened, contribu				
Incident rating  Level 1 (insignificant)  Level 3 [moderate]		Level 2 (mir		

### Actions recommended to be taken

Action	Assigned to	Completion date
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Regulatory authorities notified		
Not applicable	Yes – complete table	
Time Regulatory authority/name R	esponse	
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Other stakeholders notified		
	esponse	
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	**************************************	
Media interest ☐ No ☐ Yes – provide details		
<del></del>		
(provide details of media interest)		
Comments		egua esta da capación de la composición dela composición de la com
(any other relevant information)		

### Incident Notification Form: Blackberry-friendly format

To be completed and forwarded to the SEQ Water Grid Manager via email: emergency

Incident no: 2010-xxx

Reporting organisation:

Date:

Time:

Location:

Address:

Reported by:

Nature of incident/emergency: (delete unwanted responses)

Water quality Water asset failure Water quantity

Security or natural disaster

Health and safety (public or employees)

Environment Public reassurance Other (please specify)>

Details:

(what happened, contributing factors, immediate actions taken)

**Incident rating:** 

(delete unwanted responses)

Level 1 (insignificant) Level 2 (minor)

Alert

Level 3 (moderate) Level 4 (major) Level 5 (catastrophe)

Actions recommended to be taken: (action, assigned to, completion date)

Regulatory authorities notified: (delete unwanted responses)

Not applicable

Yes (provide details of who was contacted and their response)

Other stakeholders notified: (delete unwanted responses)

Not applicable

Yes (provide details of who was contacted and their response)

Media interest:

(delete unwanted responses)

Yes (provide details) >

Comments:

(any other relevant information)>

### Attachment H: Sample Situation Report (SITREP) template

	•	`	, ,		
From To			Date Time		
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Incident name		***************************************	шимономинаниции		
Incident number		91291299449944992189429944999789997999	******************************	. 1965-1965 (1966-1966-1966-1966-1966-1966-1966-1966	
Incident level			44		
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contacts	, , , , , , , , , , , , , , , , , , , ,	**************************	*******************************		
Summary and backinsert brief summary		ident			
Incident Manage Name	ment Team	Role			
<b> </b>	***************************************		***************************************	<del>({****</del> }********************************	
Status of asset/operations  (outline condition of asset and impact on Grid Participant's operations)					
Actions to date					
Timing	. <b>А.</b> с.1; крич				
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### Overall assessment

(summarise assessment of incident response and recovery actions)

### **Future actions**

	Action
2011-231-241-241-241-241-241-241-241-241-241-24	

### Issue of SITREPs

Next SITREP due	Date	Time
SITREP issue	Name	
contact details	Phone	
	Email	

### Authorised by

(name of Grid Participant Incident Manager)

### Attachment I: Informal Ministerial briefing template

This template is intended for use by the SEQ Water Grid Communications Unit to informally brief the responsible Ministers' offices directly on issues relating to incidents within the SEQ Water Grid on behalf of all State-owned Grid Participants.

Briefing to:	What we know:
<ul> <li>Minister for Natural Resources, Mines and</li> </ul>	>
Energy	
• Treasurer	What we don't know:
	>
Briefing from:	
(organisation, title, name, contact details)	What we are doing:
>	>
Date:	What we need the Minister's office to do:
>	(e.g. approve, endorse, agree, note)
	>
Subject:	
>	Key contact person:
	(organisation, title, name, contact details)
Reason for briefing:	>
> '	
	Next briefing:
Incident timing:	(timing, type of briefing)
>	>
Incident location:	
>	
Incident rating:	
(delete unwanted responses)	
Level 1 (insignificant)	
Level 2 (minor)	
Alert	
Level 3 (moderate)	
Level 4 (major)	
Level 5 (catastrophe)	

Copy completed form to the responsible Minister's office and the SEQ Water Grid Manager Duty Manager.

### Attachment J: Incident Close-out Report

### Incident Close-out Report: standard format

To be completed and forwarded to the SEQ Water Grid Manager via email: emergency

Incident number	2010-xxx	31111111111111111111111111111111111111	
Reporting organisation			***************************************
Actions taken			
Action			Completion date
		NANEEN ON DE STANKEN VAN DE STANKEN	
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Actions requiring fol	iow-up		
Action		Assigned to	Completion date
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		; ;	<u> </u>
Verification and clos			-
		e to reduce both the likelihon nd that the incident can be c	·
2. All relevant parties ha made in relation to th		ective/preventative actions t	aken, or decisions
Name	Title	Date	

System dose-out

Title

Date

### Incident Close-out Report: Blackberry-friendly format

To be completed and forwarded to the SEQ Water Grid Manager via email:

<u>emergency</u>
Incident no: 2010-xxx >
Reporting organisation: >
Actions taken: (action, completion date) >
Actions requiring follow-up: (action, assigned to, completion date) >
Verification and closure:
<b>1.</b> I am satisfied the actions taken have been effective to reduce both the likelihood and severity of the issues recurring and to effect improvement, and that the incident can be closed-out.
2. All relevant parties have been advised of the corrective/preventative actions taken, or decisions made in relation to this incident.
Name: >
Title: >
Date: >
System close-out:
Name:
Title:

### Attachment K: Debriefing minutes template

Incident name		**************************************	
Incident number		mainomannomanna anno anno an	
Incident time period  Debriefing date			
Debriefing start time			
Debriefing atter	ndance		
Present			
Name	Organisation	Name	Organisation
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Facilitator/s			
Name		Organ kadikan	

### Debriefing introduction

Facilitator's remarks	(insert facilitator's opening remarks, e.g. aims of debriefing, any particular
	focus of debriefing, context of emergency, etc.)
Other remarks	от о

### Emergency response structure

### Notification and close-out

Incident level	Initial level	 Date	
	Revised level	Date	
	Revised level	Date	
Notification date			
Notification time			
Close-out date			

### Command and Control Framework

Role	Entity	Comments
Incident management	(insert Grid Participant)	
	(insert Grid Participant)	
Technical coordination	(insert Grid Participant)	
Communications coordination	(insert Grid Participant)	
Emergency management	(insert agency – normally Water Grid Manager)	

### Impacted Grid Participants

Grid Participant	Nature of impact
MILITARIA CALIFORNIA DI MANTANIA MANTAN	

### Emergency timeline

Date	Entity	Action
		HADDODARADARADARADARADARADARADARADARADARA
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### Incident classification/consequences

Question/prompt  Describe the incident.	Responses
What was the incident classification against the SEQ Water Grid Emergency Response Plan? What criteria were applied?	
What were the consequences of the incident?	
Who was impacted by the incident?	
Other comments.	

### Incident details/notification and response

Question/prompt	Responses
When was the incident first noticed?	
Who first noticed the incident?	
Who alerted other people to the incident?	
Who did they first alert to the incident?	
How was the incident communicated:  • internally	
<ul> <li>externally to stakeholders?</li> </ul>	
How were communications initiated and maintained between affected entities?	
<ul><li>How</li><li>When</li><li>Where</li><li>were the media involved?</li></ul>	
What were the communication protocols relevant to the incident?	
Who briefed the media?	
What organisations were involved?	
Who was in command at each impacted Grid Participant?	
Which organisation was the 'lead agency'?	
Which organisation managed the incident?	

Question/prompt	Responses
What were the SEQ	
Water Grid Emergency Response Plan	
procedures relevant to the incident?	
Were there any	чествення при
damages to:	
• people	
<ul><li>property</li><li>asset</li></ul>	
• reputation?	
What actions were	
taken by the affected organisation/s?	
What were the	
production impacts of the incident?	
What	·
materials	
<ul><li>equipment</li><li>resources</li></ul>	
were used to respond to the incident?	
What was the cost of	много по при на прина на прина В прина на прини на прина
response to the event:	
<ul><li>time</li><li>money?</li></ul>	
What were the impacts	летивного от прин <mark>азания выправления по подата в принастивности в принастичности в принастичности в принасти в подата в принасти в подата в принасти в подата в подата</mark>
on:	
• customers	
stakeholders?      Mile and it is a lead.	матин жазанын тарын т 
Which entities had which roles in recovery	
and restoration from the incident?	
Other comments.	
***************************************	

### Analysis of emergency response/rectification

Question/prompt	Responses
What were the key responses that	
contributed to the	
successful management of the	
incident?	
What actions were	
required by the SEQ Water Grid Emergency	
Response Plan?	
What could be done	
differently next time if there was a similar	
incident?	
What could be done to prevent similar	
consequences in the	
future?	
What could be done to reduce the incidence	
of:	
<ul> <li>damage/loss of production</li> </ul>	
stakeholder/	
customer confidence?	
Any other:	เพลาะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเก
• gaps	
• issues	·
• key learning's	
• comments?	

### Actions arising from debriefing

Action	Estilly	Türsəri carma:

### Debriefing close

Facilitator's remarks	(insert facilitator's closing remarks)
Other remarks	
Reminders/notices/ further meetings	
Debriefing close time	

### Attachment L: Post-emergency Report template

This Report functions as a summary of information, documentation and feedback on an emergency. It should be completed following a thorough debriefing process, and incorporate its results. The Post-emergency Report is a vehicle for information consolidation, analysis and formalised recommendations.

### Notification and close-out

			************************************	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	***************************************
Incident number		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		*********************	
Incident name					
Incident level	Initial level			Date	
	Revised leve	el		Date	
	Revised leve	el		Date	
Incident location	Site	**********			
	Address	*******			
Notification date		<b>****</b> ********************************		78 (18 18 11 17 11 18 18 18 18 18 18 18 18 18 18 18 18	
Notification time				IF II L I FASA II 21 I I I FISC I FO	
Notifying organisation		******			
Close-out date					
Close-out signed off by					

### Description

### Command and Control Framework

Role	Entity	Comments
Incident management	(insert Grid Participant)	THE CLASSIC CONTROL OF THE CONTROL O
	(insert Grid Participant)	
Technical coordination	(insert Grid Participant)	
Communications coordination	(insert Grid Participant)	
Emergency management	(insert agency – normolly Water Grid Manager)	

Refer also to Attachment 1: Emergency response team members.

### Impacted Grid Participants

Grid Participant	Nature of impac	it	
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Key issues/risks			
Water quality		Health and safety of employees or public	
Water asset failure		Environment	
Water quantity		Public reassurance	
Security or natural disaster		Other (please specify)	EASEST 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Summary and background of incident (insert brief summary of incident details)

### SEQ Water Grid Emergency Response Plan

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### **End status**

(outline condition of asset and impacted Grid Participant/s' operations at incident close-out)

### Communications

Strategic messages	
Information sharing	(outline information sharing actions)
Stakeholder management	(outline stakeholder management actions)
External communications and media management	(outline external communications and media management actions)
Public spokesperson	
Other	(outline)

### Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of emergency response

or ciricipation response	
Strengths	Weaknesses
•	•
•	•
•	•
•	•
Opportunities	Threats
	•

## Key findings

1.	
2.	
3.	
4.	
5.	

## Recommendations

Action		Entity	Timeframe
1.			
2.			
3.			
4.	:		
5.			



### Tool/resource

Please refer to the SEQ Water Grid Emergency Response Plan for more information on emergency response processes and requirements.

## Attachment 1: Emergency Response Team members

Entity	Name and title	Emergency response role
1		
	<u> </u>	
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# Attachment 2: Media coverage summary

Date		Publication/station/program		Tone/assessment
				***************************************
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**********	***********************	(151/1014) (451/1416) 1461/1471 1471/1471 1471/1471 1471/1471 1471/1471 1471/1471 1471/1471 1471/1471 1471/147		***************************************
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## Attachment 3: Incident documentation attached

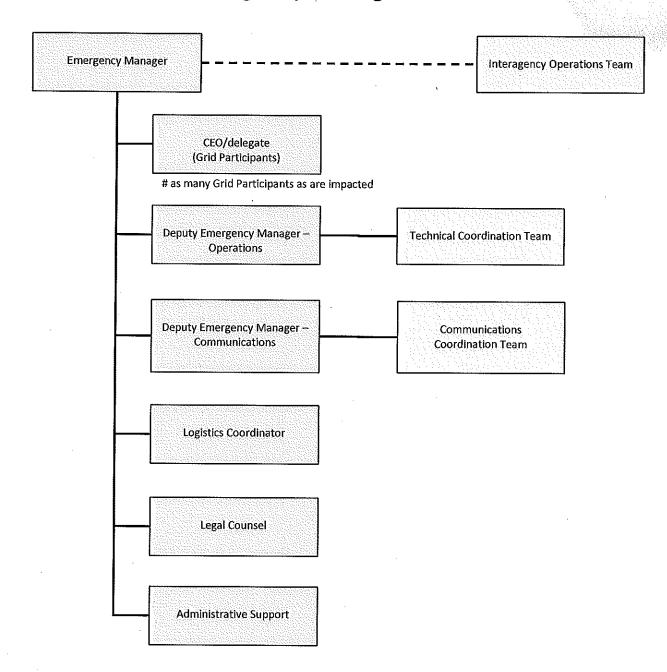
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# Attachment M: Emergency response action checklist

Step		Have you	Ø
	Identify and assess incident severity	established that the incident can be classed as an emergency?	
		<ul> <li>assessed the incident's initial severity classification level using the descriptions and examples in Table 3: Incident severity classification levels of SEQ Water Grid Emergency Response Plan?</li> </ul>	
<b>3)</b> 144 <b>0</b> 1674 <b>70</b> 1611141		<ul> <li>considered potential risks arising as the emergency situation progresses?</li> </ul>	
6	Notify	<ul> <li>notified the Grid Participant internal emergency contact?</li> </ul>	
(4)		<ul> <li>phoned to notify the Water Grid Manager Duty Manager if it is an Alert or Level 3, 4 or 5 emergency?</li> </ul>	
		emailed the Water Grid Manager Duty Manager a completed Incident Notification Form (Attachment G)?	
		<ul> <li>sent the Office of the Water Supply Regulator a completed Drinking water quality: incident reporting form, Part A, if applicable (copy to Water Grid Manager Duty Manager)?</li> </ul>	
		notified the relevant key stakeholders?	
***********		opened an Emergency Response Log?	
(2)	Establish command and	<ul> <li>mobilised the Grid Participant's Incident Management Team as per its internal Emergency Response Plan?</li> </ul>	
	control	mobilised the Technical and Communications Coordination Teams and incident room?	
		<ul> <li>determined the 'lead agency' and mobilised its emergency command structure and Interagency Operations Team, if required?</li> </ul>	
	•	activated the SEQ Water Grid Emergency Response Plan?	
************	9977711117117277272717277777	begun the process of continuous risk reassessment, drawing on specialised expertise as appropriate?	

Step		Have you	M
	Manage the	verified the incident level?	
	emergency	continually reassessed risk, command and control, and interagency communications?	
		• implemented incident management at the asset/site level as per the Grid Participant's internal Emergency Response Plan and operating protocols?	
		established effective liaison among all interested parties in the emergency response and with key stakeholders?	
		<ul> <li>used the Water Grid Manager to coordinate additional resources from other Grid Participants?</li> </ul>	
		for major health-related incidents, committed support to the Queensland Health Emergency Coordination Team?	
		<ul> <li>modelled the impacts on security of supply and issued new Grid Instructions, if required?</li> </ul>	
		issued Emergency Operating Instructions, if required?	
		<ul> <li>briefed relevant key stakeholders and established a schedule for ongoing updates?</li> </ul>	
		issued an approved holding statement to the media?	
		<ul> <li>developed a communication strategy and key messages for this incident?</li> </ul>	
		<ul> <li>established who will be the public face/spokesperson for the response?</li> </ul>	
		developed further media statement as appropriate?	
		<ul> <li>developed and disseminated public information releases, e.g. for publication via Grid Participant websites and call centres?</li> </ul>	
ASA	Manage the	established the recovery objectives?	
	recovery	recovered the asset?	
		<ul> <li>issued Grid Instructions, if required, to achieve whole-of-Grid recovery?</li> </ul>	
		<ul> <li>issued an approved close-out statement to the media, if appropriate?</li> </ul>	
		completed an Incident Close-out Report and copied it to the Water Grid Manager (and other Emergency Manager)(Attachment J)?	
		submitted Part B of the Office of the Water Supply Regulator form 'Drinking water quality: incident reporting'?	
	Improvement	carried out a 'hot' debrief?	
(0)	actions	carried out a 'cold' debrief (Attachment K)?	
		completed a Post-emergency Report (Attachment L)?	
	***************************************	forwarded recommendations for inclusion in Risk Registers?	

# Attachment N: Emergency Management Team structure



# Please note: this is an indicative structure. Depending on the emergency situation, it may require some changes to effectively manage the response.

#### SOUTH EAST QUEENSLAND WATER GRID

#### GRID CONTRACT DOCUMENT

I, the Honourable Karen Struthers MP, Minister for Minister for Community Services and Housing and Minister for Women and acting Minister for Natural Resources, Mines and Energy and acting Minister for Trade of the State of Queensland, hereby make this Grid Contract Document for the supply of Declared Water Services pursuant to section 360ZDD(1)(a) of the Water Act 2000 (Qld) between:

Name:

South East Queensland Water Grid Manager

ABN:

14 783 317 630

Short name:

Water Grid Manager

Address:

Level 15

53 Albert Street

Brisbane Queensland 4001

Facsimile:

**7** 

Attention:

Chief Executive Officer

and

Name:

Queensland Bulk Water Supply Authority, trading as

Seqwater

ABN

75 450 239 876

Short name:

Service Provider

Address:

PO Box 15236, City East Queensland 4002

Facsimile:

racsiiiiie.

Attention: Chief Executive Officer

This Grid Contract Document includes the following documents, each of which is attached to and forms part of this Grid Contract Document:

Appendix A

General terms and conditions

Schedule 1

Definitions

Schedule 2

ADWG Specifications

Schedule 3

**Quality Parameters** 

Schedule 4

Manufactured Water Quality Requirements

Schedule 5

**Bulk Supply Points** 

Schedule 6

Raw Water Metering (Power Stations)

This Grid Contract Document may not be amended except as set out in clause 32.8 and 32.9 of Appendix A.

Dated this day of June 2010

The Honourable Karen Struthers MP
Minister for Community Services and Housing and Minister for Women
Acting Minister for Natural Resources, Mines and Energy
Acting Minister for Trade

App	endix A – General terms and conditions	4
Bac	kground	4
1.	Definitions	4
2.	Interpretation	. 4
3.	Resolving inconsistencies	4
4.	Grid Contract Document	5
5.	Extension	5
6.	Legislative Requirements	5
7.	Contracted obligations	5
8.	SEQ Water Entitlement	6
9.	Supply of Potable Water and Raw Water	6
10.	Quality	7
11.	Service Provider obligations	9
12.	Transfer of risk	10
13.	Bulk Supply Points	10
14.	Infrastructure losses	10
15.	Maintenance	11
16.	Metering	. 12
17.	Grid Service Charges	13
18.	GST	14
19.	Indemnity and liability	15
20.	Insurance	17
21.	Default	18
22.	Water supply emergencies	- 18

23.	Forecasted interruptions	18
24.	Permitted interruptions	19
25.	Force Majeure	20
26.	Dispute resolution	21
27.	Access rights	21
28.	Information sharing	22
29.	Subcontracting	. 23
3 <b>0</b> .	Nature of relationship	24
31.	Notices	24
32.	Miscellaneous provisions	24
Sch	edule 1 – Definitions	26
Sch	edule 2 – ADWG Specifications	29
Sch	edule 3 – Potable Water Additional Quality Parameters	30
Sch	edule 4 – PRW Water Quality Requirements	33
Sch	edule 5 – Bulk Supply Points	34
Sch	edule 6 – Raw Water Metering (Power Stations)	37

## Appendix A – General terms and conditions

## Background.

- A Water Grid Manager and Service Provider were established under section 6(1) of the Restructuring Act.
- B Water Grid Manager holds various water entitlements under the Water Act and is a counterparty to Grid Contract Documents made by the Minister under section 360ZDD of the Water Act for the supply of Declared Water Services from Grid Service Providers and the supply of bulk water to Grid Customers.
- C Service Provider is registered as a Bulk Supplier under the Market Rules and must carry out Bulk Supply Services in accordance with the Market Rules.
- D This Contract sets out the terms and conditions upon which Service Provider will, in accordance with the Market Rules, store, release and access Potable Water and Raw Water for Water Grid Manager, treat Potable Water and Raw Water for Water Grid Manager, accept Purified Recycled Water at Manufactured Water Supply Points and make available Potable Water and Raw Water at Bulk Supply Points.

#### Definitions

Capitalised terms used in this Contract have the meanings specified in Schedule 1. Capitalised terms used and not defined in Schedule 1 have the meaning specified in the Market Rules.

## Interpretation

- (a) Sections 11.5 and 11.6 of the Market Rules apply to the interpretation of this Contract as though they were set out in this Contract with any necessary modifications to ensure consistency with this Contract.
- (b) In this Contract:
  - (i) a reference to an Appendix or a Schedule is a reference to an Appendix or a Schedule to this Contract;
  - (ii) a reference to 'A\$', '\$A', 'dollar' or '\$' is to Australian currency;
  - (iii) a reference to 'water' includes Manufactured Water; and
  - (iv) unless the context otherwise requires, a reference to the 'supply' or 'delivery' of Potable Water and Raw Water to any person includes making Potable Water and Raw Water available to such person.
- (c) In this Appendix A, unless otherwise indicated, a reference to a clause is a reference to a clause in this Appendix A.

## 3. Resolving inconsistencies

Any inconsistency, ambiguity or discrepancy between the provisions of this Contract and the other documents or instruments listed in section 1.10 of the Market Rules, will be resolved in accordance with section 1.10 of the Market Rules.

#### Grid Contract Document

- (a) This Contract is a Grid Contract Document made by the Minister under section 360ZDD(1)(a) of the Water Act.
- (b) The Declared Water Services from which the water supplied to Water Grid Manager under this Contract is supplied are those Declared Water Services declared by the Minister, from time to time, under Chapter 2A, Part 5A, Division 2 or section 1161 of the Water Act.
- (c) This Contract commences on the Commencement Date and, subject to clause 5, terminates on the Expiry Date (**Term**).

#### Extension

Subject to Chapter 2A of the Water Act:

- (a) between 1 July 2019 and 31 December 2019, Service Provider may notify Water Grid Manager that it wishes to extend the term of this Contract by a period of up to 10 years (Extension Notice);
- (b) if Service Provider gives an Extension Notice, the parties will use their best endeavours to negotiate and agree an extension of the Term and any amendments to the terms and conditions of the Contract;
- (c) if, prior to 1 July 2020, the Parties agree in writing to extend the Term, the Term will be extended for the agreed period and this Contract will be varied as agreed (if applicable); and
- (d) if, by 1 July 2020, the parties have not agreed in writing to extend the Term, this Contract will terminate in accordance with clause.

## 6. Legislative Requirements

- (a) The Parties must perform all of their obligations under, and otherwise comply with, all Legislative Requirements which are relevant to the performance of Service Provider's obligations under this Contract, including the documents and instruments referred to in section 1.10 of the Market Rules.
- (b) A failure to perform or otherwise act in accordance with a Legislative Requirement will constitute a breach of this Contract.
- (c) Service Provider must:
  - (i) obtain and maintain all licenses, approvals, permits, consents and other authorisations required to own or operate the Service Provider Infrastructure, and
  - (ii) notify Water Grid Manager promptly if any license, approval, permit, consent or other authorisation required to own or operate the Service Provider Infrastructure is cancelled, forfeited, withdrawn, terminated or expires.

## 7. Contracted obligations

(a) Water Grid Manager may rely on the performance by Grid Participants of their obligations under other Grid Contract Documents to constitute performance by Water Grid Manager of its obligations under this Contract (including in relation to the delivery of Purified

Recycled Water into the Service Provider Infrastructure at Manufactured Water Supply Points in accordance with clause 9.2), provided that any failure by such Grid Participants to perform their obligations under such other Grid Contract Documents will not relieve Water Grid Manager from liability for its obligations under this Contract except to the extent set out in clause 19.4.

- (b) Service Provider's performance of its obligations under this Contract may constitute performance by Water Grid Manager of its obligations under Grid Contract Documents with:
  - (i) Grid Service Providers for the supply of Declared Water Services by such Grid Service Providers; and
  - (ii) Grid Customers for the supply of Potable Water and Raw Water to such Grid Customers.

### 8. SEQ Water Entitlement

#### 8.1 Agency

- (a) Water Grid Manager appoints Service Provider as its agent (and Service Provider accepts the appointment) for the purpose of managing, releasing, delivering, taking and otherwise dealing with (for the purposes of this clause 7, **dealing with**) the SEQ Water Entitlement for the purpose of and in accordance with and subject to this Contract and the Market Rules.
- (b) In dealing with the SEQ Water Entitlement, Service Provider must comply with the terms and conditions of the SEQ Water Entitlement, as notified by Water Grid Manager to Service Provider, Legislative Requirements and Good Operating Practice, and must not cause Water Grid Manager to breach any Legislative Requirements or any term or condition of the SEQ Water Entitlement.
- (c) This agency may only be terminated in the event of termination of this Contract.

#### 8.2 Assistance

Service Provider must:

- without limitation to clause 16.1, meter all Raw Water taken under the SEQ Water Entitlement from Raw Water Supply Points for which Service Provider is the Responsible Person under the Market Rules and provide such meter readings to the Water Grid Manager by the 10th Business Day of each month and without limitation to clause 16 otherwise comply with Chapter 6 of the Market Rules in respect of each Raw Water Supply Point; and
- (b) provide Water Grid Manager with all other information reasonably required by Water Grid Manager in order to comply with its obligations in relation to reporting under the SEQ Water Entitlement and Legislative Requirements including to comply with the terms and conditions of any transmission licence under the Water Act.

## 9. Supply of Potable Water and Raw Water

#### 9.1 Supply of Potable Water and Raw Water by Service Provider

Service Provider make available Raw Water at Raw Water Supply Points and Potable Water at Potable Water Supply Points in accordance with this Contract, the Market Rules and Approved Operating Protocols.

#### 9.2 Supply of Manufactured Water to Service Provider

- (a) Under Grid Contract Documents with Manufactured Water Providers, Water Grid Manager may, but is under no obligation to, procure the supply of Purified Recycled Water into the Service Provider Infrastructure at Manufactured Water Supply Points.
- (b) Service Provider must receive Purified Recycled Water into the Service Provider Infrastructure at Manufactured Water Supply Points in accordance with this Contract, Legislative Requirements and Good Operating Practice.
- (c) Water Grid Manager must use its best endeavours to ensure that Purified Recycled Water delivered to Manufactured Water Supply Points complies with the Quality Requirements.

#### 9.3 Management of catchment areas by Service Provider

Service Provider must:

- (a) use its best endeavours to manage all water catchment areas for the Service Provider Infrastructure which it owns or controls in accordance with Good Operating Practice;
- (b) use reasonable endeavours to ensure the appropriate management in accordance with Good Operating Practice by others of catchment areas for the Service Provider Infrastructure which Service Provider does not own or control; and
- (c) store, release, take, deliver and make available Potable Water and Raw Water in accordance with Good Operating Practice.

## 10. Quality

#### 10.1 Testing and reporting

Service Provider must:

- (a) test and monitor Potable Water and Raw Water in the Service Provider Infrastructure in accordance with Schedule 2, Legislative Requirements and Good Operating Practice;
- (b) report the results of such testing and monitoring to Water Grid Manager in the form required by Water Grid Manager; and
- (c) immediately notify Water Grid Manager (and any other affected Grid Participant) if it becomes aware of any deterioration, other than deterioration that is minor or immaterial, in the quality of Potable Water and Raw Water in the Service Provider Infrastructure or at a Bulk Supply Point.

#### 10.2 Potable Water Quality Requirements

Service Provider must:

- (a) ensure that all Potable Water made available at Potable Water Supply Points under this Contract is fit for human consumption and meets the Quality Requirements; and
- (b) use its best endeavours to ensure that Potable Water made available at Potable Water Supply Points under this Contract meets the Potable Water Additional Quality Parameters.

#### 10.3 Potable Water - Failure to meet Quality Requirements

As soon as reasonably practicable after a Party becomes aware that Potable Water made available (or to be made available) at a Bulk Supply Point does not meet (or will not meet) the Quality Requirements:

(a) that Party must notify the other Party;

- (b) Water Grid Manager may issue a direction to Service Provider as to the manner in which the Potable Water which does not meet the Quality Requirements should be dealt with, and Service Provider must comply with the direction unless to do so would cause Service Provider to breach a Legislative Requirement; and
- (c) Service Provider must:
  - (i) use its best endeavours to ensure that further Potable Water made available at Bulk Supply Points meets the Quality Requirements;
  - (ii) inform Water Grid Manager of the reason for the failure (or potential failure) to meet the Quality Requirements and the measures undertaken to prevent or remedy such failure; and
  - (iii) provide Water Grid Manager with daily updates of the reason for any continuing failure and the measures being undertaken to remedy such continuing failure.

#### 10.4 Manufactured Water – Failure to meet Quality Requirements

As soon as reasonably practicable after a Party becomes aware that Manufactured Water made available (or to be made available) at a Manufactured Water Supply Point does not meet (or will not meet) the Quality Requirements:

- (a) Water Grid Manager may issue a direction to Service Provider as to the manner in which Manufactured Water which does not meet the Quality Requirements should be dealt with, and Service Provider must comply with the direction unless to do so would cause Service Provider to beach a Legislative Requirement; and
- (b) Water Grid Manager must:
  - (i) use its best endeavours to ensure that further Manufactured Water made available at Manufactured Water Supply Points meets the Quality Requirements;
  - (ii) inform Service Provider of the reason for the failure (or potential failure) to meet the Quality Requirements and the measures undertaken to prevent or remedy such failure; and
  - (iii) provide Service Provider with daily updates of the reason for any continuing failure and the measures being undertaken to remedy such continuing failure; and
- (c) that Party must notify the other Party and the relevant Manufactured Water Provider.

#### 10.5 Raw Water Quality

- (a) Service Provider makes no representation and gives no warranty about, or in relation to the quality, suitability or fitness for any purpose of Raw Water made available under this Contract and any such representation or warranty that might be implied is hereby expressly negated.
- (b) Water Grid Manager acknowledges that:
  - (i) there are many factors that affect Raw Water quality;
  - (ii) Raw Water is not fit for human consumption;
  - (iii) Service Provider may, in accordance with Good Operating Practice, from time to time add chemicals or other foreign matter to Raw Water made available under this Contract, and the addition of such chemicals or other foreign matter may adversely affect the quality, suitability or fitness for any purpose of the Raw Water so supplied; and

(iv) Raw Water supplied under this Contract may originate from various sources, including Purified Recycled Water, and the mixing of Raw Water from such sources may affect the quality of Raw Water made available by Service Provider.

#### 10.6 Testing and monitoring of Raw Water

- (a) Water Grid Manager must satisfy itself as to the quality, suitability or fitness for any purpose of any Raw Water made available by Service Provider to Water Grid Manager under this Contract.
- (b) Water Grid Manager acknowledges that it may be necessary to treat and process Raw Water and carry out other activities to ensure that Raw Water made available under this Contract is of a quality that is suitable for the purpose for which it is intended to be used.
- (c) Notwithstanding clauses 10.6(a) and 10.6(b), Service Provider must provide to Water Grid Manager any information known to Service Provider in relation to the quality, suitability or fitness for purpose of any Raw Water made available, or to be made available, under this Contract as soon as reasonably practicable:
  - (i) after any reasonable request by Water Grid Manager; or
  - (ii) after Service Provider becomes aware of any information indicating there may be a material risk of any:
    - (A) damage to the property of any person or the environment; or
    - (B) injury or harm to any individual.

#### 10.7 Directions by authorities

Service Provider must, as soon as reasonably practicable, provide Water Grid Manager with a copy of:

- (a) any direction or notice given to Service Provider under the Water Supply Act in relation to the quality or safety of Potable Water supplied to Water Grid Manager under this Contract including under sections 102, 102A, 270, 271 or 436 of that Act or under section 57A of the Public Health Act; and
- (b) any correspondence which Service Provider gives in response to such direction or notice.

## 11. Service Provider obligations

Service Provider must:

- (a) obtain and maintain all licenses, approvals, permits, consents and other authorisations required to carry out its obligations under this Contract;
- (b) comply with any reasonable request from Water Grid Manager for information which may assist Water Grid Manager to perform its obligations under the System Operating Plan, including in relation to minimising the costs and maximising the efficiency of the Water Grid:
- (c) use its best endeavours to minimise, mitigate and measure water losses in the Service Provider Infrastructure, including storage losses (including evaporation and leakage), release losses, transport losses and treatment losses; and
- (d) ensure that the Service Provider Infrastructure is at all times designed, constructed, operated and maintained so as to enable Service Provider to comply with all Legislative Requirements.

#### 12. Transfer of risk

- (a) Service Provider has all risk in, and responsibility for, any Potable Water and Raw Water dealt with under this Contract from the point where Service Provider takes the water (as set out in paragraph 1 of the definition of 'water' in the Water Act) from a dam, watercourse, lake, spring or underground source.
- (b) All risk in, and responsibility for:
  - (i) Potable Water transfers to Water Grid Manager at Potable Water Supply Points;
  - (ii) Raw Water transfers to Water Grid Manager at Raw Water Supply Points.

## 13. Bulk Supply Points

#### 13.1 New Bulk Supply Point

If either Party wants to designate a new Bulk Supply Point:

- (a) the Party wishing to designate the new Bulk Supply Point must:
  - (i) notify the other Party of the proposed location of the new Bulk Supply Point; and
  - obtain the written consent of any Grid Participant whose Infrastructure will
    connect to the Service Provider Infrastructure at the new Bulk Supply Point and
    provide a copy of such consent to the other Party;
- (b) Without limitation to clause 13.1(d), neither Service Provider or Water Grid Manager shall unreasonably withhold consent to the new Bulk Supply Point;
- (c) Service Provider must use its best endeavours to agree Operating Protocols in relation to the new Bulk Supply Point with any Grid Participant whose Infrastructure will connect to the Service Provider Infrastructure at the new Bulk Supply Point; and
- (d) the Operating Protocol must be approved by Water Grid Manager under and in accordance with section 3.19 of the Market Rules.

#### 13.2 Interconnection costs

Service Provider must agree with each Connected Grid Participant on the allocation between themselves of all costs incurred in connection with the installation, operation and maintenance of all interconnection works between the Service Provider Infrastructure and any Infrastructure.

#### 14. Infrastructure losses

Any reference in an Instruction to a volume of Potable Water and Raw Water to be:

- (a) received at a Bulk Supply Point; or
- (b) made available at a Bulk Supply Point;

will be deemed to represent the actual volume of Potable Water and Raw Water to be received or made available at that Bulk Supply Point, and will not include any volume of Potable Water and Raw Water to account for any system losses in any Infrastructure.

#### 15. Maintenance

#### 15.1 Notification by Service Provider

- (a) Service Provider must:
  - subject to clause 15.1(b) and clause 24, provide Water Grid Manager and all other Connected Grid Participants with not less than 60 days prior notice of all planned or scheduled maintenance to the Service Provider Infrastructure that may affect the performance of Service Provider's obligations under this Contract, including details of the matters to be set out in a notice given under clause 24.2(a);
  - (ii) to the extent reasonably practicable:
    - (A) comply with any reasonable request from Water Grid Manager to reschedule such activities;
    - (B) minimise the duration of any interruption to the performance of Service Provider's obligations under this Contract as a result of the planned or scheduled maintenance; and
    - (C) minimise the impact of the planned or scheduled maintenance on the quality of the Potable Water to be delivered by Service Provider under this Contract; and
  - (iii) use its best endeavours not to exceed the time frames specified for the planned or scheduled maintenance in the notice provided to Water Grid Manager under clause 15.1(a)(i).
- (b) Without limitation to clause 15.1(a)(ii)(A), Water Grid Manager must use its reasonable endeavours to notify Service Provider of a request to reschedule any planned or scheduled maintenance notified by Service Provider under clause 15.1(a)(i) by no later than 45 days prior to the day on which Service Provider has notified that the planned or scheduled maintenance is expected to commence.
- (c) The obligation of Service Provider to notify Water Grid Manager under clause 15.1(a)(i) does not apply to the extent that the planned or scheduled maintenance will only have an immaterial effect on the performance of Service Provider's obligations under this Contract.

#### 15.2 Notification by Water Grid Manager

- (a) Subject to clause 15.2(c), Water Grid Manager must notify Service Provider of all maintenance to Infrastructure that may affect the performance of Service Provider's obligations under this Contract.
- (b) Water Grid Manager's notice to Service Provider under clause 15.2(a) must:
  - (i) include details of the matters to be set out in a notice given under clause 24.2(a) (as though Water Grid Manager were giving the notice under that clause); and
  - (ii) be given:
    - (A) in the case of any maintenance to Infrastructure that is not regularly required or anticipated to be required, as soon as reasonably practicable after the need to perform such unplanned maintenance is known by Water Grid Manager; and
    - (B) in the case of maintenance to Infrastructure the performance of which is required on a planned, regular or scheduled basis or is otherwise reasonably anticipated to be required to ensure the continuous and proper

functioning of the Infrastructure, as soon as reasonably practicable but in any event no later than 45 days prior to the anticipated commencement of the maintenance.

(c) The obligation of Water Grid Manager to notify Service Provider under clause 15.2(a) does not apply to the extent that the maintenance will have an immaterial effect on the performance of Service Provider's obligations under this Contract.

## 16. Metering

#### 16.1 Responsibility for metering

- (a) Service Provider must obtain Meter Data in accordance with Chapter 6 of the Market Rules for all Bulk Supply Points for which Service Provider is the Responsible Person under the Market Rules.
- (b) Water Grid Manager must:
  - (i) obtain meter readings in respect of Potable Water and Raw Water supplied to a Bulk Supply Point for which Service Provider is not the Responsible Person under the Market Rules for each calendar month and provide those meter readings to Service Provider by no later than the 10th Business Day of the following calendar month; and
  - (ii) provide reasonable assistance to Service Provider in carrying out its obligations under clause 16.2(a), including by assisting through using Water Grid Manager's best endeavours to procure meter readings in relation to meters located outside the Service Provider Infrastructure.
- (c) The Parties acknowledge and agree that the volume of Raw Water supplied to Bulk Supply Points for CS Energy Limited and Tarong Energy Corporation Limited will be determined in accordance with Schedule 6.

#### 16.2 Metering results

- (a) Without limitation to the obligations of Service Provider under Chapter 6 of the Market Rules, Service Provider must, in connection with each invoice issued to Water Grid Manager under clause 17.2, provide Water Grid Manager with the Meter Data and other data used to:
  - (i) determine the actual volumes of Potable Water and Raw Water; and
  - calculate any estimated volumes of Potable Water and Raw Water in accordance with the Alternate Methodology published pursuant to section 6.4 of the Market Rules,

made available at Bulk Supply Points during the preceding calendar month.

(b) Service Provider's obligations under clause 16.2(a) to provide Water Grid Manager with any Meter Data relating to Potable Water and Raw Water supplied to any Bulk Supply Point for which Service Provider is not the Responsible Person under the Market Rules, shall be subject to Service Provider's receipt of meter readings and all other relevant data from Water Grid Manager.

#### 16.3 Invoice adjustment for inaccurate or failed Metering Installations

(a) Service Provider must:

- (i) notify Water Grid Manager as soon as reasonably practicable if a Metering Installation or Transitional Metering Installation is found to be inaccurate, whether as a result of any calibration or verification testing performed by Service Provider pursuant to the Market Rules or any other applicable Legislative Requirements or otherwise; and
- (ii) use the Alternate Methodology in the circumstances contemplated by section 6.24 of the Market Rules.
- (b) If an invoice issued by Service Provider under clause 17.2 was prepared on the basis of metering results from an inaccurate or failed Metering Installation or Transitional Metering Installation, any overpayment or underpayment made on the basis of such invoice will be corrected by making a corresponding adjustment to the next invoice issued in accordance with clause 17.2 after the overpayment or underpayment is discovered.

## 17. Grid Service Charges

#### 17.1 Payment obligations

Water Grid Manager must, upon receipt of an invoice from Service Provider in accordance with clause 17.2, pay (monthly in arrears and in accordance with clause 17.3) the Grid Service Charges for each calendar month during the Term.

#### 17.2 Monthly invoices

- (a) Within 15 Business Days of the end of each calendar month during the Term, Service Provider must issue an invoice to Water Grid Manager specifying:
  - (i) the Grid Service Charges for the calendar month;
  - (ii) any other amounts (including overdue payments) payable by Water Grid Manager to Service Provider in accordance with this Contract;
  - (iii) any adjustments made pursuant to clause 16.3(b);
  - (iv) the volume of Potable Water delivered by Service Provider to each Bulk Supply Point, or where the Alternate Methodology applies, the estimated total volume of Potable Water supplied to a Bulk Supply Point, during the previous calendar month metered or estimated in accordance with clause 16.2; and
  - (v) the account to which payment must be made.
- (b) Each invoice issued by Service Provider to Water Grid Manager must be accompanied by such supporting documentation as may reasonably be required by Water Grid Manager to verify the invoice.

#### 17.3 Payment terms

Subject to clause 17.4, Water Grid Manager must pay Service Provider the amount stated in an invoice issued pursuant to clause 17.2 within 20 Business Days of Water Grid Manager's receipt of the invoice or the determination of a dispute in respect of the invoice under clause 17.4.

#### 17.4 Payment disputes

- (a) If Water Grid Manager disputes all or any part of an invoice it must:
  - (i) pay that part of the invoice not in dispute; and

(ii) provide a detailed statement of its grounds for disputing all or any part of an invoice (with such reasonable supporting details as may be required to substantiate such grounds) to Service Provider,

by the due date for payment of that invoice under clause 17.3.

- (b) Payment of all or any part of an invoice does not prejudice the Water Grid Manager's right to dispute all or any part of such invoice.
- (c) If the dispute cannot be resolved between the Parties within 10 Business Days of Service Provider's receipt of Water Grid Manager's statement of its grounds for disputing the invoice, the dispute must be determined in accordance with Chapter 9 of the Market Rules.

#### 17.5 Continued performance

Subject to the terms and conditions of this Contract (including clause 21), each Party must continue to perform its obligations under this Contract notwithstanding any dispute between the Parties relating to an invoice issued in accordance with this clause 17 or any amount owing in accordance with this Contract.

#### 17.6 Interest on overdue sums

Interest on overdue sums (including any overdue sum that was subject to a dispute resolved in favour of Service Provider) will be payable at the Default Rate and such interest will accrue from the due date for payment in accordance with clause 17.3 until the date of payment.

#### 17.7 Prudential Requirements and Security

Water Grid Manager must comply with section 2.23 of the Market Rules and acknowledges that Service Provider may have recourse to any Security provided by Water Grid Manager if Water Grid Manager fails to perform its obligations under this clause 17.

#### 18. GST

#### 18.1 Interpretation

In this clause 18, words or expressions have the same meaning as defined in the A New Tax System (Goods and Services Tax) Act 1999 (Cth), unless the context makes it clear that a different meaning is intended.

#### 18.2 GST gross up

If a Party makes a supply under or in connection with this Contract in respect of which GST is payable, the consideration for the supply but for the application of this clause 18 (GST Exclusive Consideration) is increased by an amount equal to the GST Exclusive Consideration multiplied by the rate of GST prevailing at the time the supply is made.

#### 18.3 Reimbursements

If a Party must reimburse or indemnify another Party for a loss, cost or expense, the amount to be reimbursed or indemnified is first reduced by any input tax credit to which the other Party is entitled for the loss, cost or expense and then increased in accordance with clause 18.2. That Party is assumed to be entitled to a full input tax credit unless it proves, before the date on which the payment must be paid, that its entitlement is otherwise.

#### 18.4 Tax invoices

Notwithstanding any other provision of this Contract, the recipient of a taxable supply made under or in connection with this Contract need not make a payment until the supplier has given the

recipient a tax invoice for the supply to which the payment relates. The supplier must give the recipient an adjustment note for an adjustment arising from an adjustment event relating to a taxable supply made under or in connection with this Contract within 5 Business Days after the date the supplier becomes aware of the adjustment event.

#### 18.5 GST group

If a Party is a member of a GST group, references to GST which the Party must pay, and to input tax credits to which the Party is entitled, include GST which the representative member of the GST group must pay and input tax credits to which the representative member is entitled.

#### 18.6 Indemnities

If a payment under an indemnity gives rise to a liability to pay GST, the payer must pay and indemnify the payee against the amount of that GST.

## 19. Indemnity and liability

#### 19.1 Indemnity of Service Provider

- (a) Subject to clause 19.4, Water Grid Manager must indemnify Service Provider for all costs, charges, expenses, losses or damages incurred by Service Provider that result, directly or indirectly, from a failure by a Connected Grid Participant to perform the obligations of the Connected Grid Participant under an Approved Operating Protocol.
- (b) The indemnity in clause 19.1(a) does not vary or exclude the operation of section 360ZDI(1) of the Water Act.

#### 19.2 Indemnity of Water Grid Manager

Service Provider must indemnify Water Grid Manager and each of its board members, directors, officers, employees, agents, contractors and other representatives for all costs (including legal costs), charges, expenses, losses or damages incurred by or awarded against each of those persons as a direct or indirect result of:

- (a) any breach of this Contract by Service Provider, including any breach of an Approved Operating Protocol and any breach in respect of which Water Grid Manager exercises an express right to suspend the payment of all or any amount due and payable under this Contract under clause 21.2; or
- (b) any loss of or damage to any property (including the environment) or injury to or death of any person caused or contributed to by any negligent or unlawful act or omission or any wilful misconduct of:
  - (i) Service Provider; or
  - (ii) any of Service Provider's board members, directors, officers, employees, agents, contractors or other representatives to the extent that Service Provider is vicariously liable for the negligent or unlawful act or omission or wilful misconduct of any such person, or the negligent or unlawful act or omission or wilful misconduct of any such person was carried out in the course of their employment by Service Provider or the performance by the person of their responsibilities to Service Provider,

whether arising as a result of any Claim brought by Service Provider or a third party, or otherwise.

#### 19.3 Exclusions

Service Provider's obligation to indemnify Water Grid Manager and each of its board members, directors, officers, employees, agents, contractors and other representatives under clause 19.2 will be reduced proportionately to the extent that any breach of this Contract by Water Grid Manager, or any negligent or unlawful act or omission or wilful misconduct of:

- (a) Water Grid Manager; or
- (b) any of Water Grid Manager's board members, directors, officers, employees, agents, contractors or other representatives to the extent that Water Grid Manager is vicariously liable for the negligent or unlawful act or omission or wilful misconduct of any such person, or the negligent or unlawful act or omission or wilful misconduct of any such person was carried out in the course of their employment by Water Grid Manager or the performance by the person of their responsibilities to Water Grid Manager,

has contributed to the costs, expenses, losses or damages incurred by or awarded against such persons.

#### 19.4 Liability of Water Grid Manager

- (a) Subject to clause 19.4(b), the total, aggregate liability of Water Grid Manager to Service Provider (including for a breach of Water Grid Manager's obligations under this Contract) for any costs, expenses, losses or damages (Losses) sustained or incurred by Service Provider as a result of:
  - (i) any breach of a Grid Contract Document; or
  - (ii) any negligent or unlawful act or omission or wilful misconduct (including a breach of the Market Rules),

by any Grid Participant or Grid Participants on whom Water Grid Manager relied to perform Water Grid Manager's obligations under this Contract pursuant to clause 7(a) is limited to an amount equal to the Pass Through Limit.

For the purposes of this clause 19.4, the Pass Through Limit is the amount that Water Grid Manager recovers from such Grid Participant or Grid Participants in connection with the relevant breach, act or omission or wilful misconduct by any Grid Participant or Grid Participants (less Water Grid Manager's costs of such recovery) provided such amount is limited to the extent that the recovered amount relates to the Losses sustained or incurred by Service Provider in connection with the relevant breach, act or omission by such Grid Participant or Grid Participants.

- (b) Water Grid Manager must:
  - (i) use its best endeavours to enforce each Grid Contract Document on which it relies to perform its obligations under this Contract (Relevant Grid Contract Document); and
  - subject to clause 19.4(c), not waive a breach by a Grid Participant of any obligations under a Relevant Grid Contract Document where such breach may result in Water Grid Manager being unable to perform its obligations under this Contract without first obtaining the written consent of Service Provider, which consent must not be unreasonably withheld.
- (c) It will not be necessary for Water Grid Manager to seek the consent of Service Provider under clause 19.4(b)(ii) in circumstances where the relevant breach is minor or immaterial.

#### 19.5 Survival of indemnity

This clause 19 will survive the termination or expiry of this Contract.

#### 20. Insurance

#### 20.1 Water Grid Manager insurances

Water Grid Manager must effect and keep current at all times during the Term (and, in the case of policies that insure on a 'claims made' basis, for a period of 7 years thereafter), such policies of insurance as an entity carrying out activities similar to those carried out by Water Grid Manager would effect, acting reasonably, including (to the extent they are available to Water Grid Manager on commercially reasonable terms):

- (a) professional indemnity insurance; and
- (b) public liability cover.

#### 20.2 Service Provider insurances

- (a) Service Provider must effect and keep current at all times during the Term (and, in the case of policies that insure on a 'claims made' basis, for a period of 7 years thereafter) such policies of insurance as an entity carrying out activities similar to those carried out by Service Provider would effect, acting reasonably, including (to the extent they are available to Service Provider on commercially reasonable terms):
  - (i) professional indemnity insurance;
  - (ii) public and products liability cover; and
  - (iii) industrial special risks cover.
- (b) Service Provider must use its reasonable endeavours to accommodate any reasonable request by another Grid Participant to be named as an additional or co-insured on any policy of insurance carried by Service Provider, provided the requesting Grid Participant:
  - (i) has an insurable interest in the subject matter of the applicable policy of insurance, and
  - (ii) agrees to pay Service Provider an amount equal to the increase in the amount of any premiums payable under the relevant policy of insurance, on terms reasonably acceptable to Service Provider.

#### 20.3 Evidence of insurance

Service Provider must provide Water Grid Manager with copies of the policies of insurance or certificates evidencing the currency of the policies of insurance that Service Provider is required to maintain in accordance with clause 20.2:

- (a) by no later than 30 September of each year during the Term; and
- (b) within 30 days of receiving a written request from Water Grid Manager at any other time (including in the case of policies that insure on a 'claims made' basis, during the 7 years after the Term).

#### 20.4 Changes to insurances

Service Provider must promptly notify Water Grid Manager if, at any time during the Term (and, in the case of policies that insure on a 'claims made' basis, for a period of 7 years thereafter), any policy of insurance Service Provider holds in accordance with clause 20.2 is cancelled or found to be void *ab initio* or there is any material change to the terms of such policy.

#### 21. Default

#### 21.1 Event of Default

If Service Provider fails to perform or comply with any of its obligations under this Contract (Event of Default), Water Grid Manager may serve a notice on Service Provider specifying the Event of Default and the time within which Service Provider must remedy the Event of Default (if the Event of Default is capable of being remedied) or take all reasonable steps to prevent the recurrence of the Event of Default (if the Event of Default is not capable of being remedied) which time must not be less than 10 Business Days after the date that the notice is given to Service Provider by Water Grid Manager.

#### 21.2 Suspension of payment by Water Grid Manager

If, within the time specified in a notice given by Water Grid Manager under clause 21.1, Service Provider fails to:

- (a) take all reasonable steps to prevent the recurrence of an Event of Default that is not capable of remedy;
- (b) remedy any Event of Default that is capable of being remedied to the satisfaction of Water Grid Manager; or
- (c) provide satisfactory assurance to Water Grid Manager that any Event of Default that is capable of being remedied will be remedied as soon as reasonably practicable,

then Water Grid Manager may immediately suspend payment of all moneys otherwise due and payable under this Contract to Service Provider until such time as Service Provider has remedied the Event of Default or taken all reasonable steps to prevent the recurrence of an Event of Default that is not capable of remedy.

#### 21.1 Continued performance

Subject to this clause 21, notwithstanding an Event of Default or a failure by Water Grid Manager to comply with its obligation to pay an amount due and payable to Service Provider under this Contract, each of the Parties must continue to perform its obligations under this Contract and the Market Rules.

#### 21.2 Remedies not exclusive

The exercise by Water Grid Manager of its rights and remedies under this clause 21 are without limitation to any other rights or remedies available to Water Grid Manager in respect of any Event of Default.

## 22. Water supply emergencies

The obligations under this Contract will be suspended to the extent they are inconsistent with an emergency declaration or emergency regulation made by the Minister under the Water Act which is applicable to the Parties, but only to the extent of the inconsistency and only for the duration of the emergency declaration or emergency regulation.

## 23. Forecasted interruptions

Without limitation to clauses 15.1 and 24, not less than once in each Quarter, Service Provider must notify Water Grid Manager and all other affected Grid Participants of any reasonably anticipated and material:

- (a) shortfall in the amount of Potable Water and Raw Water available to be supplied; or
- (b) interruptions to the supply of Potable Water and Raw Water, to any Bulk Supply Point.

## 24. Permitted interruptions

#### 24.1 Service Provider permitted interruptions

Subject to clause 24.2, Service Provider may, without incurring liability to Water Grid Manager, interrupt or curtail the taking and delivery of Potable Water and Raw Water under this Contract:

- (a) to comply with any emergency declaration or emergency regulation, as described in clause 22:
- (b) to accommodate the performance of planned or scheduled maintenance to the Service Provider Infrastructure, provided such maintenance has been notified to Water Grid Manager within the time specified in clause 15.1(a)(i);
- (c) to prevent or minimise actual or imminent damage to the property of any person;
- (d) to avoid actual or imminent injury or harm to any individual;
- (e) to comply with any Legislative Requirement;
- (f) where such interruption or curtailment results from any non-performance or failure to perform by another Grid Participant of an obligation under a Grid Contract Document or the Market Rules, provided that Grid Participant's non-performance or failure to perform is permitted or excused under the applicable Grid Contract Document or the Market Rules; or
- (g) in order to comply with the terms and conditions of the SEQ Water Entitlement to the extent that such requirement to interrupt or curtail the supply is not due to any breach of, or failure to perform an obligation under, this Contract or the Market Rules by Service Provider.

#### 24.2 Service Provider obligations

- (a) Service Provider must notify Water Grid Manager as soon as reasonably practicable after Service Provider determines to interrupt or curtail the supply of Potable Water and Raw Water under clause 24.1 or, in the case of interruption or curtailment under clause 24.1(f), becomes aware that supply has been curtailed or interrupted, giving particulars of:
  - (i) the reason for the interruption or curtailment;
  - (ii) the date and time of commencement of the interruption or curtailment;
  - (iii) the expected duration of the interruption or curtailment; and
  - (iv) any measures Service Provider has taken or will take to mitigate the effect of the interruption or curtailment.
- (b) Except in the case of an interruption or curtailment under clause 24.1(b), Service Provider will have fulfilled its obligation under clause 24.2(a) where the notice to be given by Service Provider to Water Grid Manager under that clause was given after the interruption or curtailment had commenced, provided that it was not reasonably practicable for Service Provider to have given notice at an earlier time.

(c) Service Provider must, to the extent reasonably practicable, minimise the period of any interruption or curtailment under clause 24.1 and resume such supply as expeditiously as possible after the event or circumstance giving rise to the interruption or curtailment has ceased or abated to an extent which permits the resumption of such supply.

## Force Majeure

#### 25.1 Notification and diligence.

A Party that is, by reason of Force Majeure, unable to perform any obligation under this Contract (Affected Party) must:

- (a) notify the other Party in writing as soon as reasonably practicable after becoming aware of the Force Majeure giving particulars of the event or circumstance of Force Majeure (known at the time of giving notice) including:
  - (i) the date of commencement of the Force Majeure;
  - (ii) details of the Force Majeure;
  - (iii) the obligations which the Affected Party is unable to perform, whether in whole or in part;
  - (iv) the expected duration of the delay arising as a result of the Force Majeure;
  - (v) details of the action the Affected Party has taken and proposes to take to remedy, abate or mitigate the effects of the Force Majeure; and
  - (vi) an estimate of the period of time required to enable it to resume full performance of its obligations;
- (b) use its best endeavours to remedy, abate or mitigate the effects of the Force Majeure as expeditiously as possible; and
- (c) resume performance as expeditiously as possible after the Force Majeure has abated to an extent which permits resumption of performance, and notify the other Party immediately when resumption of performance has occurred.

#### 25.2 Non-performance excused

- (a) Any failure by an Affected Party to perform an obligation under this Contract will, to the extent that such performance is precluded, wholly or in part, by Force Majeure:
  - (i) be excused;
  - (ii) not give rise to any liability to the other Party, including for later performance of the obligation, the performance of which was precluded by the Force Majeure; and
  - (iii) be deemed not to result in a breach of this Contract, or (in the case of Service Provider) an Event of Default.
- (b) An Affected Party must, to the extent possible notwithstanding the Force Majeure, continue to comply with all of its other obligations under this Contract.
- (c) Nothing in this clause 25 will relieve a Party that is not affected by Force Majeure from performing its obligations under this Contract unless and to the extent such performance is precluded by the failure of an Affected Party to perform its obligations under this Contract.

#### 25.3 Payment obligations

An event or circumstance of Force Majeure does not relieve either Party from any payment obligation under this Contract.

## 26. Dispute resolution

#### 26.1 Disputes to be resolved in accordance with the Market Rules

Subject to clause 17.4, any dispute between the Parties arising under or in connection with this Contract or the Market Rules must be resolved in accordance with Chapter 9 of the Market Rules.

#### 26.2 Disputes with Grid Participants

All disputes among Grid Participants, whether arising under or in connection with the Market Rules or the Approved Operating Protocols must be resolved in accordance with Chapter 9 of the Market Rules.

#### 26.3 Continued performance of obligations

Notwithstanding the existence of a dispute, each Party must continue to perform its obligations under this Contract and the Market Rules.

## 27. Access rights

- (a) Subject to clause 27(b), Water Grid Manager may from time to time during the Term request, on its own behalf and on behalf of any Connected Grid Participant, that Service Provider grant Water Grid Manager and any such Connected Grid Participant access to the land owned or otherwise controlled by Service Provider (Controlled Area) as may be necessary to:
  - (i) install interconnection works for a new Bulk Supply Point designated pursuant to clause 13;
  - (ii) establish any required connections between the Service Provider Infrastructure and any Infrastructure;
  - (iii) comply with this Contract or Legislative Requirements;
  - (iv) monitor performance by Service Provider of its obligations under this Contract;
  - (v) install or maintain any interconnection works at Bulk Supply Points;
  - (vi) install, operate and maintain any metering or monitoring equipment necessary to meter the quantity, or monitor the quality, of Potable Water and Raw Water to be supplied in accordance with this Contract, any other Grid Contract Document, the Market Rules or any Approved Operating Protocol;
  - (vii) test any Metering Installation or Transitional Metering Installation in accordance with section 6.19 of the Market Rules; and
  - (viii) in the case of Water Grid Manager:
    - (A) comply with Water Grid Manager's obligations under this Contract, any other Grid Contract Document, the Market Rules or any other Legislative Requirements; and
    - (B) monitor performance by any Grid Participant of their obligations under any Grid Contract Documents,

- which requests must not be unreasonably denied by Service Provider, but may be granted subject to such conditions as are reasonable in the circumstances.
- (b) If any consent or authorisation is required to be obtained to permit Water Grid Manager or any Connected Grid Participant to gain access to a Controlled Area that is not owned by Service Provider for the purposes described in clause 27(a):
  - (i) Service Provider must use its reasonable endeavours to procure all such required consents or authorisation from the relevant landowner, Government Instrumentality or other person; and
  - (ii) Water Grid Manager must provide such assistance and information, complete such forms and comply with all such directions and procedures as may reasonably be required by Service Provider or the relevant landowner, Government Instrumentality or other person to obtain the required consents or authorisations, and ensure that any other Grid Participant who requires access do the same.
- (c) Water Grid Manager must ensure that any board member, director, officer, employee, agent, contractor or other representative of Water Grid Manager or of any contractor of Water Grid Manager, including any Connected Grid Participant, who accesses a Controlled Area in accordance with this clause 27 complies with all applicable Legislative Requirements, Service Provider's access policies and induction requirements, and all reasonable directions of Service Provider, and causes as little interference and disruption to the operation of the Service Provider Infrastructure or the operations on the third party land as is reasonably practicable having regard to the purpose of such person or persons in entering the Controlled Area.
- (d) Water Grid Manager must use its best endeavours to procure access to any land owned or otherwise controlled by any Connected Grid Participant (Connected Grid Participant Controlled Area) as may be required by Service Provider for any of the purposes set out in clauses 27(a)(i) to 27(a)(vii).
- (e) A Party who is granted access to any Controlled Area or Connected Grid Participant Controlled Area must, as soon as reasonably practicable, remedy any damage to Infrastructure or any other property (whether belonging to Service Provider, Water Grid Manager, a Connected Grid Participant or any other third party) located on or within the Controlled Area or the Connected Grid Participant Controlled Area caused by:
  - (i) in the case of Water Grid Manager:
    - (A) Water Grid Manager or any board member, director, officer, employee, agent, contractor or other representative of Water Grid Manager or of any contractor of Water Grid Manager; and
    - (B) any Connected Grid Participant or any board member, director, officer, employee, agent, contractor or any other representative of any Connected Grid Participant or of any contractor of Connected Grid Participant; and
  - (ii) in the case of Service Provider, Service Provider or any board member, director, officer, employee, agent, contractor or other representative of Service Provider or of any contractor of Service Provider.

## 28. Information sharing

(a) Subject to clauses 28(b) and 28(c), each Party must provide the other with any information reasonably required to assist the other Party with:

- (i) infrastructure planning;
- short and medium term water balance modelling and formulation of Grid Instructions;
- (iii) the development of operation and maintenance, water quality, incident and risk management plans, protocols and policies; and
- (iv) compliance with, or demonstrating compliance with, Legislative Requirements.
- (b) Clause 28(a) does not apply to any information:
  - (i) that a Party, in its sole discretion, considers to be commercially sensitive;
  - (ii) that is subject to a legally recognised form of professional privilege; or
  - (iii) in respect of which an obligation of confidentiality is owed to a third party.
- (c) The confidentiality obligations set out sections 11.1, 11.2 and 11.3 of the Market Rules apply to all Confidential Information exchanged between the Parties in connection with this Contract as though such obligations were set out in this Contract with any necessary modifications to ensure consistency with this Contract.
- (d) In addition to the exceptions to confidentiality set out in section 11.3 of the Market Rules, the Parties may disclose Confidential Information to their contractors, subcontractors, agents and other representatives, provided the Party to whom Confidential Information is disclosed has a need to know the Confidential Information and the Party making disclosure informs the proposed recipient of the confidentiality of the information and takes appropriate precautions to ensure the proposed recipient keeps the information confidential and does not use the information for any purpose other than the purpose for which it is disclosed.

## 29. Subcontracting

- (a) Subject to clause 29(b), Service Provider must not enter into a contract or other arrangement with another person in relation to:
  - (i) the operation and maintenance of the Service Provider Infrastructure;
  - (ii) the performance of any of Service Provider's obligations under this Contract in relation to quality management, testing or monitoring of the quality of Potable Water; or
  - (iii) the performance of any of Service Provider's obligations under this Contract in relation to metering,

without the prior written consent of Water Grid Manager which consent must not be unreasonably withheld or delayed but which may be given subject to any reasonable conditions.

- (b) Service Provider is not required to obtain Water Grid Manager's consent to a contract or other arrangement relating to the operation and maintenance of the Service Provider Infrastructure if the total amount payable by Service Provider under the contract or other arrangement each year is less than five per cent of Service Provider's operation and maintenance budget for the corresponding year.
- (c) Service Provider is responsible for the performance of all of its obligations under this Contract and remains liable for any failure to comply with its obligations under this Contract despite entry into a contract or other arrangement with another person.

### 30. Nature of relationship

- (a) This Contract is not intended to create nor will it be construed as creating any legal partnership, joint venture or fiduciary relationship between the Parties and it will not give rise to any obligations between the Parties apart from those obligations expressly stated in this Contract or imposed by Legislative Requirements. Without limitation, the provisions of this Contract do not give rise to joint and several liability between the Parties.
- (b) Each of the Parties is an independent entity, and for the purposes of this Contract, the board members, directors, officers employees, agents, subcontractors or other representatives of each of the Parties will not be regarded as board members, directors, officers, employees, agents, subcontractors or other representatives of another Party, unless deemed otherwise by law.

#### 31. Notices

Section 11.7 of the Market Rules will apply to all communications (including all notices, consents, approvals, requests and demands) given under or in connection with this Contract, as though that section was set out in this Contract with any necessary modifications to ensure consistency with this Contract.

## 32. Miscellaneous provisions

#### 32.1 Assignment

Service Provider and Water Grid Manager must not assign or transfer and must not purport to assign or transfer any of their respective rights or obligations under this Contract.

#### 32.2 Governing law

This Contract is to be governed by and construed in accordance with the laws of the State of Queensland and each Party irrevocably and unconditionally submits to the exclusive jurisdiction of the courts of Queensland.

#### 32.3 Entire agreement

This Contract constitutes the entire agreement between the Parties with respect to the subject matter of this Contract and supersedes all previous communications, representations, inducements, undertakings, agreements or arrangements between the Parties.

#### 32.4 Joint and several liability

If a Party comprises two or more persons, the provisions of this Contract binding that Party bind those persons jointly and severally.

#### 32.5 Survival after termination

The termination of this Contract will not affect any terms of this Contract that expressly provide that they will operate after termination or expiry of this Contract or which of necessity must continue to have effect after termination or expiry of this Contract, notwithstanding that the clauses themselves do not expressly provide for this.

#### 32.6 No waiver

A person does not waive its rights, powers or discretions (for the purpose of this clause, 'rights') under this Contract by:

(a) failing to exercise its rights;

- (b) only exercising part of its rights; or
- (c) delaying the exercise of its rights.

#### 32.7 Severability

Part or all of any provision of this Contract that is illegal or unenforceable may be severed from this Contract and the remaining provisions of this Contract will continue in force.

#### 32.8 Amendments prior to 1 July 2011

- (a) Subject to clause 32.8(b), this Contract may only be amended by the Minister prior to 1 July 2011.
- (b) Notwithstanding clause 32.8(a), the Parties may amend any of Schedule 2, Schedule 3, Schedule 4. Schedule 5 or Schedule 6, provided that:
  - (i) the Parties agree in writing on the form of any amendment to be made to such Schedules; and
  - (ii) the form of each amendment is notified to the Rules Administrator, in which case the amendments will take effect from the date that notice is given to the Rules Administrator under this clause 32.8(b).
- (c) Service Provider must ensure that any amendments required to be made to the Approved Operating Protocol as a result of an amendment made to any of Schedule 2, Schedule 3, Schedule 4, Schedule 5 or Schedule 6, under this clause 32.8 are made and approved in accordance with the Market Rules.

#### 32.9 Amendment from 1 July 2011

From 1 July 2011, the Parties may amend this Contract only in accordance with the Water Act.

## Schedule 1 – Definitions

Capitalised terms used in this Contract have the meaning specified below. Capitalised terms used and not defined in this Contract have the meaning specified in Market Rules.

ADWG Specifications means the requirements set out in Schedule 2.

Affected Party has the meaning specified in clause 25.1.

Claim means any and all causes of action, claims, demands, or proceedings of any nature arising or commenced in any jurisdiction, whether in tort (including negligence), in equity, for breach of contract, for legal costs or interest, or otherwise.

Commencement Date means 1 July 2010.

Connected Grid Participant means any Grid Participant whose Infrastructure connects with the Service Provider Infrastructure.

Connected Grid Participant Controlled Area has the meaning specified in clause 27(d).

Contract means this Grid Contract Document, including all Appendices and Schedules attached to and forming part of this Grid Contract Document, and any reference to the obligations of a Party under this Contract is a reference to the obligations of that Party in each Appendix and Schedule of this Contract.

Controlled Area has the meaning specified in clause 27(a).

**Default Rate** means the interest rate applicable to debt funding arrangements between Service Provider and Queensland Treasury Corporation, plus 2%.

Directive means any present or future requirement, instruction, direction or order of a Government Instrumentality that is legally issued and binding on either Party (as applicable) or otherwise applies in respect of the Water Grid, and any modification, extension or replacement thereof from time to time in force.

Event of Default has the meaning specified in clause 21.1.

Expiry Date means 30 June 2020.

Force Majeure means, in respect of a Party, any event or circumstance or combination of events or circumstances outside that Party's reasonable control, including:

- a lack of available supply of power, water or other essential equipment, goods, supplies or services;
- (b) acts of God, including without limitation, droughts, earthquakes, floods, wash outs, landslides, lightning, storms or natural disasters;
- (c) fires or explosions;
- (d) epidemics, pandemics or quarantines;
- (e) strikes, lockouts, bans, slowdowns or other industrial disturbances (other than of a localised or entity-specific nature);
- (f) any order of any court or the order, law, rule, regulation, act or omission of any Government Instrumentality having jurisdiction or any failure to obtain any necessary consent or approval of any Government Instrumentality;

- (g) any accident, breakages or accident to machinery, pipelines or other infrastructure or equipment, the necessity for making repairs and/or alterations in machinery, pipelines or other infrastructure or equipment, freezing of reservoirs, catchments or pipelines;
- (h) terrorism, acts of a public enemy, war (declared or undeclared), blockades, revolution, insurrection, rebellion, riots, sabotage, invasion, rebellion, political disturbance or civil disturbance:
- (i) the failure of a Grid Service Provider, a Distribution Service Provider or Grid Customer to perform an obligation under a Grid Contract Document or the Market Rules where the Grid Service Provider, Distribution Service Provider or Grid Customer's failure to perform is permitted or excused by the terms of the applicable Grid Contract Document or the Market Rules; or
- (j) the effects of any of the foregoing events or circumstances that continue after the cessation of the relevant event or circumstance.

which, by taking due care and proper precautions, or by using reasonable alternative measures, that Party is not reasonably able to prevent or overcome.

Government Instrumentality means any federal, state or local government or any ministry, department, court, commission, agency, institution or similar entity of any such government.

**Grid Participant** means a Grid Service Provider (other than Service Provider), Distribution Service Provider or Grid Customer.

**GST Exclusive Consideration** has the meaning specified in clause 18.2.

Instruction means any Grid Instruction. Operating Instruction or Emergency Operating Instruction.

#### Legislative Requirements means:

- (a) any statute, regulation, by-law, ordinance or statutory instrument of the Commonwealth of Australia or the State of Queensland;
- (b) any ordinances, orders, awards, statutes, proclamations, codes, standards or legally issued and binding guidelines of any Government Instrumentality with jurisdiction over the Parties or the subject matter of this Contract;
- (c) any terms or conditions of any licences, approvals, permits, consents or authorisations issued by a Government Instrumentality to either Party; and
- (d) any Directive,

whether in existence at the date of this Contract or coming into existence after that date.

Losses has the meaning specified in clause 19.4(a).

Market Rules means the South East Queensland Water Market Rules made by the Minister under section 360ZCX of the Water Act.

Parties means, collectively, Water Grid Manager and Service Provider and Party means either of them.

PRW Quality Requirements means the Manufactured Water quality specifications set out in Schedule 4.

PRW Supply Point means a Bulk Supply Point for Manufactured Water identified in Schedule 5.

#### Quality Requirements means:

(a) any water quality requirements set out in Legislative Requirements, including in respect of Potable Water, any approved Drinking Water Quality Management Plan and in respect of Purified Recycled Water, any approved recycled water management plan (as defined in the Water Act); and

- (b) in respect of Potable Water, the ADWG Specifications; and
- (c) in respect of Purified Recycled Water, the PRW Quality Requirements.

**Quarter** means a period of 3 calendar months commencing on each 1 January, 1 April, 1 July and 1 October during the Term.

Raw Water Meter means a meter located at a Raw Water Supply Point.

Raw Water Supply Point means a Bulk Supply Point for Raw Water identified in Schedule 5.

Relevant Grid Contract Document has the meaning specified in clause 19.4(b)(i).

Relevant Meter means a meter that is used to measure the flow of water through a Bulk Supply Point that has not yet been assessed in accordance with section 6.7 of the Market Rules.

**SEQ Water Entitlement** means the various water allocations, water licences and interim water allocations held by Water Grid Manager under the Water Act.

Service Provider Infrastructure means Infrastructure owned or controlled by Service Provider.

**Term** has the meaning specified in clause 4(c).

Potable Water Additional Quality Parameters means the additional quality requirements set out in Schedule 3.

Potable Water Supply Point means a Bulk Supply Point for Potable Water identified in Schedule 5.

# Schedule 2 – ADWG Specifications

Compliance with the Australian Drinking Water Guidelines 2004 developed by the National Health and Medical Research Council in collaboration with the Natural Resource Management Ministerial Council as amended from time to time.

# Schedule 3 – Potable Water Additional Quality Parameters

In accordance with clause 10.2(b) of Appendix A, Service Provider must use its best endeavours to ensure that Potable Water supplied to Water Grid Manager under this Contract meets the Potable Water Additional Quality Parameters set out in the tables below:

In relation to Potable Water supplied from the Mount Crosby or North Pine Water Treatment Plants:

Additional Quality Parameters	Limit
Aluminium	0.2 mg/L
True Colour	5
Copper	1 mg/L
Iron	0.1 mg/L
Manganese	0.1 mg/L
Monochloramine (measured as mg Cl as Cl2/L)	4.1 mg/L
pН	6.5 – 8.5 pH
Temperature	35°C
Total Hardness	200 mg/L
Total THMs	<.25 mg/L
Turbidity	2 NTU

NTU = nephelometric turbidity

In relation to Potable Water supplied from the Molendinar or Mudgeeraba Water Treatment Plants:

Additional Quality Parameters	Limit
E.Coli	< 1 CFU/100ml
Total Coliforms	< 1 CFU/100ml
Heterotrophic Plate Count	<100 CFU/ml
Turbidity	<1.0 NTU
True Colour	<5 HU
рН	7.0 – 8.0
Free Chlorine	>or = 0.2 mg/L & < 1.5 mg/L
Manganese (Total)	< 0.05 mg/L
Aluminium (Acid Soluble)	<0:2 mg/L

Alkalinity (as CaCO3)	>35 mg/L	
·		

In relation to Potable Water supplied from the Landershute Water Treatment Plant, Noosa Water Treatment Plant, Image Flat Water Treatment Plant, Kenilworth Water Treatment Plant Noosaville Council Works Depot or Maleny Water Treatment Plant:

Additional Quality I	arameters		·
Parameter	Units	RPM <sup>1</sup>	Limiting Value
Additional Quality I	arameters for Noos	a Water Treatment Plant	
Aluminium	mg/L	≤0.05@95th percentile	0.20
Bromate	mg/L	n/a	0.02
Colour	Co-Pt	≤5@95th percentile	8
Iron (total)	mg/L	n/a	0.05
Manganese (total)	mg/L	≤0.01@95th percentile	0.02
Particles (3-12µm) <sup>2</sup>	particles/mL	n/a	100
Trihalomethanes	mg/L	n/a	0.20
Turbidity	NTU	≤0.30@95th percentile	0.50
Additional Quality I	Parameters for Imag	e Flat Water Treatment Pl	ant
Aluminium	mg/L	≤0.05@95th percentile	0.20
Colour	Co-Pt	≤5@95th percentile	8
Iron (total)	mg/L	n/a	0.05
Manganese (total)	mg/L	≤0.01@95th percentile	0.02
Turbidity	NTU	≤0.30@95th percentile	0.50
Additional Quality I	Parameters for Kenil	worth Water Treatment P	lant
Aluminium	mg/L	≤0.05@95th percentile	0.20
Colour	Co-Pt	≤5@95th percentile	8
Colour	Co-Pt	≤5@95th percentile	8

<sup>&</sup>lt;sup>1</sup> Rolling Performance Measure (RPM)

For 95th percentile compliance a sample is deemed to comply if no more than two tests out of the most recent fifty tests exceed the stated maximum RPM values.

<sup>&</sup>lt;sup>2</sup> For Particle Count compliance a sample is deemed to comply if there is less than 100 particles per millilitre in the size range 3μm to 12μm.

Additional Quality P	arameters	· · · · · · · · · · · · · · · · · · ·	
Parameter	Units	RPM <sup>1</sup>	Limiting Value
Iron (total)	mg/L	n/a	0.05
Manganese (total)	mg/L	≤0.01@95th percentile	0.02
Turbidity .	NTU	≤0.30@95th percentile	0.50
Quality Parameters	or Landershute Water	Treatment Plant	
Aluminium	mg/L	≤0.05@95th percentile	0.20
Bromate	mg/L	n/a	0.02
Colour	Co-Pt	≤5@95th percentile	8
Iron (total)	mg/L	n/a	0.05
Manganese (total)	mg/L	≤0.01@95th percentile	0.02
Trihalomethanes	mg/L	n/a	0.20
Turbidity	NTU	≤0.30@95th percentile	0.50

Disinfection		•		
Site ID	Free Chlorine Residual Target	Plan Number	AMG Easting	AMG Northing
Noosaville Council Works Depot	0.5 mg/L	SC100B	504093	7078605
Image Flat Water Treatment Plant	3.0 to 3.5 mg/L	SC200A	492502	7057906
Kenilworth Water Treatment Plant	0.5 to 1.2 mg/L	SC300B	472981	7058377
Landershute Water Treatment Plant	1.2 to 1.5 mg/L	SC400B	491083	7044778
Maleny Water Treatment Plant	0.5 to 1.0 mg/L	SC500B	484623	7039983

# Schedule 4 – PRW Water Quality Requirements

- 1. Best endeavours will be used to ensure that the Purified Recycled Water supplied at the PRW Supply Points shall comply with s18AD of the *Public Health Regulation 2005* (Qld) (PHR), and meet the additional parameters set out in the table in Item 3 of this Schedule.
- 2. Compliance with Item 1 above, is subject to:
  - (a) an annual 98 percent pass rule for the microorganisms listed in Part 1, Schedule 3B of the PHR;
  - (b) an annual 95th Percentile for those chemical compounds listed in Part 2, Schedule 3B of the PHR; and
  - (c) an annual mean for those parameters listed in Item 3 of this Schedule (except for Turbidity and Total Dissolved Solids which are based on maximum values).

Parameter	Water Quality Standard
Hardness as CaCO <sub>3</sub>	50 to 125 mg/L
Alkalinity	40 to 100 mg/L
Total Nitrogen	<1.5mg/L
Total Phosphorous	<0.15 mg/L
Turbidity	5 NTU
Maximum	·
рН	6.5 – 8.5
Total Dissolved Solids (TDS)	250mg/L
Maximum	·
Manganese	<0.05mg/L
Copper	<0.05mg/L
Boron	<0.37mg/L
Aluminium	<0.img/L
Zinc	<0.1mg/L

#### 3. Meanings for Item 3.2 of the Schedule.

The following terms have the following meanings:

- (a) 'annual' this means a rolling 12 month basis; and
- (b) percentiles are to be calculated in accordance with the methodology set out in the Australian Drinking Water Guidelines 2004 developed by the National Health and Medical Research Council in collaboration with the Natural Resource Management Ministerial Council, and includes any amendments, revisions and subsequent versions of these guidelines.

# Schedule 5 - Bulk Supply Points

Manufactured Water Supply Point means the point at which Purified Recycled Water discharges from the Western Corridor Recycled Water Scheme into Wivenhoe Dam.

Raw Water Supply Point means the point at which a third party takes Raw Water at the Commencement Date or such other point as the Parties agree under clause 13.

Potable Water Supply Point means the point at which Potable Water exits a clearwater storage at a water treatment plant.

2010 ID	Description	Easting	Northing	GC 2010 ID
BS- 01	Molendinar Water Treatment Plant Outlet	534715	6905142	BS-BT- 03
BS- 02	Mudgeeraba Water Treatment Plant Outlet	532156	6891095	BS-BT- 04
BS- 03	Calamvale/Algester Aquifer	502591	6946275	QUU- 425
BS- 04	Forest Lake Aquifer	496297	6946010	QUU- 426
BS- 05	Sunnybank Aquifer	505547	6949128	QUU- 427
BS- 06	Runcorn Aquifer	507314	6948091	QUU- 428
BS- 07	Chandler Aquifer	514313	6956925	QUU- 429
BS- 12	North Pine Dam	494298	6984141	BS-BT- 09
BS- 13	North Stradbroke Island Water Treatment Plant outlet	543420	6949331	BS-BT- 05
BS- 14	Dunwich Water Treatment Plant Outlet	540725	6957444	RCC-55
BS- 15	Amity Point Water Treatment Plant Outlet	544968	6967726	RCC-57
BS- 16	Point Lookout WTP	550093	6965780	RCC-58
BS- 17	Woodford Water Treatment Plant	476347	7020033	MBRC- 05
BS- 18	Bribie Island South Water Treatment Plant	519566	7005528	MBRC- 07
BS-	Caboolture Water Treatment Plant	493944	7004047	MBRC-

2010 ID	Description	Easting	Northing	GC 2010 ID
19				04
BS- 20	Helen St Beaudesert	499330	6904859	QUU- 412
BS- 21	Albert River Water Treatment Plant	502571	6903651	QUU- 413
BS- 22	Canungra WTP	515929	6900427	QUU- 409
BS- 23	Kooralbyn	485697	6892261	QUU- 411
BS- 24	Rathdowney Water Treatment Plant	-486939	6878743	QUU- 410
BS- 25	Boonah-Kalbar Water Treatment Plant	462264	6906660	QUU- 408
BS- 26	Noosa (Lake MacDonald)	493155	7082186	SCRC- 01
BS- 27	Noosa (Lake MacDonald) -	493351	7082189	SCRC- 02
BS- 28	Image Flat Water Treatment Plant	492506	7057912	SCRC- 04
BS- 29	Kenilworth	472986	7058376	SCRC- 05
BS- 30	Maroochy - Pipe to Nambour	491113	7044800	SCRC- 06
BS- 31	Landershute to Caloundra	495834	7042306	SCRC- 07
BS- 32	Landershute - Caloundra new main	503283	7042881	SCRC- 08
BS- 33	Landershute - Maroochy new main	504646	7045123	SCRC- 09
BS- 34	Maleny	484634	7039999	SCRC- 10
BS- 36	Image Flat to Maroochy	492518	7057895	SCRC- 03
BS- 37	Lowood for Tarampa/Minden	458701	6960930	QUU- 415
BS- 38	Esk Water Treatment Plant	443915	6985846	QUU401
BS-	Somerset Water Treatment Plant	455855	7000962	QUU-

2010 ID	Description	Easting	Northing	GC 2010 ID
39				402
BS- 41	Linville Water Treatment Plant	-428936	7030212	QUU- 403
BS- 42	Kilcoy (Wade St) Water Treatment Plant	456792	7020926	QUU- 404
BS- 43	Somerset (Kilcoy)	457355	7018998	QUU- 405
BS- 44	Jimna (Yabba Ck) Water Treatment Plant	446780	7050573	QUU- 406
BS- 45	Lowood Water Treatment Plant	458720	6960941	QUU- 407
BS- 46	Capalaba Water Treatment Plant	518151	6954529	BS-BT- 06
BS- 47	Enoggera Water Treatment Plant	493110	6964103	QUU- 423
BS- 48	Enoggera Water Treatment Plant	493108	6964101	QUU- 424
BS- 49	Dayboro Water Treatment Plant			MBRC- 20
BS- 50	Mt Crosby East Bank	481267	6955539	BS-BT- 08
BS- 51	Mt Crosby West Bank	481253	6955537	BS-BT- 07
BS- 52	Banksia Beach Water Treatment Plant	519566	7005528	MBRC- 09
BS- 53	Petrie Water Treatment Plant			MBRC- 21
BS- 54	Enoggera WTP, 50 Mt Nebo Rd	492839	6964222	QUU- 422
BS- 55	Ewen Maddock WTP	501294	7039242	SCRC-
BS- 56	Wamuran Water Treatment Plant			MBRC- 22
BS- 56	Molendinar to Allconnex	537005	6892131	GCCC- 13
BS- 57	South Maclean WTP	502630	6924413	LCC-23

# Schedule 6 – Raw Water Metering (Power Stations)

#### 1. In respect of Raw Water supplied to Bulk Supply Points for CS Energy Limited:

For the purposes of this Contract, unless the Parties agree otherwise in writing, for so long as Raw Water from Wivenhoe Lake and the Warrill Supply Scheme are delivered into Berry's Lagoon and taken from Berry's Lagoon by CS Energy Limited, the total volume of Raw Water supplied to such Bulk Supply Points will be determined as follows:

Total volume = Wivenhoe Volume + Warrill Volume of Raw Water supplied

Where:

Wivenhoe Volume is the volume of Raw Water metered through the Kholo Meter; and

Warrill Volume is:

Volume of Raw Water metered - (Wivenhoe Volume x 0.90) through the Berry's Lagoon Meter

# 2. In respect of Raw Water supplied to Bulk Supply Points for Tarong Energy Corporation Limited:

For the purposes of this Contract, unless the Parties agree otherwise in writing, Water Grid Manager must calculate the volume of Raw Water supplied to such Bulk Supply Points as follows:

Volume of Raw Water supplied to Tarong Energy Corporation Limited = CM - PM

Where:

CM means the volume of water metered through the Caboonbah Meter for the relevant calendar month (Caboonbah Meter means the metering installation located on the Tarong Pipeline between the Caboonbah Balancing Tank and the Tarong Power Station in the vicinity of Grid Customer's Caboonbah Balancing Tank and known as M-085-BS Caboonbah Meter).

**PM** means the volume of water metered through the PRW Meter for the relevant calendar month (**PRW Meter** means the metering installation owned and operated by Western Corridor Recycled Water Pty Ltd located in Wester Corridor Recycled Water Pty Ltd's pipeline at Caboonbah and known as M-086-MW).

Queensland Bulk Water Supply Authority

SunWater

# Service Level Agreement – Flood Management Services

# Contents

1	Inte	rpretation	3
	1.1	Definitions	3
	1.2	Construction	6
	1.3	Headings	7
2	Terr	π	7
	2.1	Initial Period	7
	2.2	Termination	7
3	Serv	vice	7
	3.1	Supply of Service	7
	3.2	Service requirements	8
	3.3	Standard of Service	8
	3.4	Cooperation	8
	3.5	Security and access	8
	3.6	Subcontracting	9
	3.7	Exclusion of Personnel	9
-	3.8	Equipment	9
4	Rep	orting	9
	4.1	Reporting	9
5	Rec	ords	9
	5.1	Maintenance of Records	9
•	5.2	Retention of records	10
	5.3	Seqwater to have access	10
	5.4	SunWater to have access	10
	5.5	Records management agreement	10
6	Pay	ments	10
	6.1	Fees	10
	6.2	Invoice	10
	6.3	Supporting documentation	10
	6.4	Disputes	10
	6.5	Payment	11
7	Inte	llectual Property Rights	11
	7.1	Material	11
	7.2	Non-infringement warranty	11
8	Con	fidentiality	11
	8.1	No unauthorised use or disclosure	11
	8.2	Additional Disclosees	11
	8.3	Breach of confidentiality	12
	0.0		
	8.4	Return of Confidential Information	12 12

9	Liability	12
	9.1 Limitation of Liability	12
	9.2 Consequential loss excluded	· 12
	9.3 Contribution of other party	12
10	Insurance	13
	10.1 SunWater insurance policies	13
	10.2 Evidence of insurance	13
11	Dispute resolution	13
	11.1 Informal resolution of disputes	13
	11.2 Dispute Notice	13
	11.3 No litigation in absence of process	13
12	Termination for default	13
13	Notices	14
	13.1 General	14
	13.2 How to give a communication	14
	13.3 Particulars for delivery of notices	14
	13.4 Communications by post	14
	13.5 Communications by fax	15
	13.6 After hours communications	15
14	GST	15
	14.1 Construction	15
	14.2 Consideration GST exclusive	15
	14.3 Payment of GST	15
	14.4 Timing of GST payment	15
	14.5 Tax invoice	15
	14.6 Adjustment event	16
	14.7 Reimbursements	16
15	General	16
	15.1 Legal costs	16
	15.2 Amendment	16
	15.3 Waiver and exercise of rights	16
	15.4 Rights cumulative	16
	15.5 Consents	17
	15.6 Further steps	17
	15.7 Governing law and jurisdiction	17
	15.8 Assignment	17
	15.9 Counterparts	17
	15.10 Entire understanding	17
	15.11 Relationship of parties	17
	15.12 Survival of terms	18
Sche	edule 1 – Flood Control Centre Services	. 20

Date 13/10/2009

## **Parties**

QUEENSLAND BULK WATER SUPPLY AUTHORITY ABN 75450239876 of 240 Margaret Street, Brisbane, Queensland 4000 (Seqwater)

**SUNWATER LIMITED** ACN 131 034 985 of 179 Turbot Street, Brisbane, Queensland 4000 (**SunWater**)

# Background

- A Segwater is the owner of Wivenhoe, Somerset and North Pine Dams.
- B Seqwater and SunWater are parties to an agreement dated 5 March 2001 entitled contract No. T5-00/01 for Operation and Maintenance of Wivenhoe, Somerset and North Pine Dams from 2001 to 2009 as amended by deeds of variation dated 22 November 2004 and 11 August 2005 ("the Contract").
- C The Contract expired on 30 June 2009.
- D SunWater provided a range of services under the Contract, including flood management services for Wivenhoe, Somerset and North Pine Dams.
- E The parties have agreed that SunWater will continue to provide flood management services, and Seqwater will continue to pay SunWater for the provision of those Services, on the terms of this Agreement.

# Agreed terms

# 1 Interpretation

#### 1.1 Definitions

In this Agreement:

Additional Disclosee has the meaning given in clause 8.1(c).

**Agreement** means this document including its schedules and attachments, and any other document expressly incorporated by reference.

**Business Day** means a day which is not a Saturday, Sunday or bank or public holiday in Brisbane.

Confidential Information of a party means information that is by its nature confidential, is designated in good faith by that party as confidential, or the

recipient of the information knows or ought to know is confidential, and includes:

- (a) the New Material (which shall be Confidential Information of Sequater);
- (b) the Existing Material (which shall be Confidential Information of SunWater);
- (c) any data or information created, collected or captured by SunWater in the course of performing Services (which shall be Confidential Information of Seqwater);
- (d) information relating to the internal management and structure of, or the personnel, policies, systems and strategies of, a party; and
- (e) all trade and business secrets and other confidential information relating to the affairs or business of a party,

but does not include information which:

- (f) is or becomes public knowledge (other than by a breach of this Agreement); or
- (g) the recipient of the information can demonstrate was lawfully known to it prior to its disclosure by other party (or, in the case of paragraphs (a) and (c), its creation, development, collection or capture).

Contract means the agreement dated 5 March 2001 entitled contract No. T5-00/01 for Operation and Maintenance of Wivenhoe, Somerset and North Pine Dams from 2001 to 2009 as amended by deeds of variation dated 22 November 2004 and 11 August 2005.

Contract Material means New Material and Existing Material.

Corporations Act means the Corporations Act 2001 (Cth) and the Corporations Regulations made under it, as amended from time to time.

Dayworks Rates means the dayworks rates as provided for in the Contract.

**Dispute** means any dispute, disagreement, claim, controversy, demand, proceeding, suit, litigation, action or cause of action under this Agreement.

Effective Date means 1 July 2009.

Existing Material means Material, other than New Material, that is:

- (a) incorporated into New Material by or on behalf of a party; or
- (b) supplied or required to be supplied under this Agreement by a party.

**Fees** means the fees specified in the Service Schedule in relation to the Service, payable by Seqwater to SunWater.

#### Flood Operations Manuals means:

- (a) Manual for Operational Procedures for Flood Mitigation for Wivenhoe Dam and Somerset Dam; and
- (b) Manual of Operational Procedures for Flood Releases from North Pine Dam:

prepared under the Water Act 2000.

#### Insolvency Event means any of the following:

- (a) a person is or states that the person is unable to pay from the person's own money all the person's debts as and when they become due and payable;
- (b) a person is taken or must be presumed to be insolvent or unable to pay the person's debts under any applicable legislation;
- (c) an application or order is made for the winding up or dissolution or a resolution is passed or any steps are taken to pass a resolution for the winding up or dissolution of a corporation;
- (d) an administrator, provisional liquidator, liquidator or person having a similar function under the laws of any relevant jurisdiction is appointed in respect of a corporation or any action is taken to appoint any such person and the action is not stayed, withdrawn or dismissed within seven days;
- (e) a controller is appointed in respect of any property of a corporation;
- (f) a corporation is deregistered under the Corporations Act or notice of its proposed deregistration is given to the corporation;
- (g) a distress, attachment or execution is levied or becomes enforceable against any property of a person;
- (h) a person enters into or takes any action to enter into an arrangement (including a scheme of arrangement or deed of company arrangement), composition or compromise with, or assignment for the benefit of, all or any class of the person's creditors or members or a moratorium involving any of them;
- a petition for the making of a sequestration order against the estate of a person is presented and the petition is not stayed, withdrawn or dismissed within seven days or a person presents a petition against himself or herself;
- (j) anything analogous to or of a similar effect to anything described above under the law of any relevant jurisdiction occurs in respect of a person.

Intellectual Property Rights includes all present and future rights in relation to copyright, trade marks, designs, patents, trade, business or company names, trade secrets, confidential or other proprietary rights, or any rights to registration of such rights whether created before or after the date of this Agreement, and whether existing in Australia or otherwise.

Liability means any debt, obligation, claim, loss, damage, cost (including legal costs on a full indemnity basis), expense or liability of any kind and howsoever arising, including penalties, fines and interest and including those which are prospective or contingent and those which for the time being are not ascertained or ascertainable.

**Material** means tangible and intangible information, documents, reports, software (including source and object code), inventions, data and other materials in any form and on any media.

**New Material** means Material that is created, written, developed or otherwise brought into existence by or on behalf of SunWater in the course of performing the Service.

**Personal Information**, in relation to a Privacy Law, has the definition given in that Privacy Law.

**Personnel** of an entity means that entity's officers, employees, agents and contractors and each of their respective Personnel.

Privacy Law means each of:

- (a) the Privacy Act 1988 (Cth); and
- (b) the Information Privacy Act 2009 (Qld)

(as applicable to the relevant party).

**Service** means the service to be provided by SunWater to Seqwater under this Agreement, as described in the Service Schedule.

**Service Schedule** means the Schedule to this Agreement that describes the Service.

Term means the term of this Agreement under clause 2.

#### 1.2 Construction

Unless expressed to the contrary, in this Agreement:

- (a) words in the singular include the plural and vice versa;
- (b) any gender includes the other genders;
- (c) if a word or phrase is defined its other grammatical forms have corresponding meanings;
- (d) "includes" means includes without limitation;
- (e) no rule of construction will apply to a clause to the disadvantage of a party merely because that party put forward the clause or would otherwise benefit from it;
- (f) a reference to:
  - a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;
  - (ii) a person includes the person's legal personal representatives, successors, assigns and persons substituted by novation;
  - (iii) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced;

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- (iv) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
- (v) a right includes a benefit, remedy, discretion or power;
- (vi) time is to local time in Brisbane;
- (vii) "\$" or "dollars" is a reference to Australian currency;
- (viii) this or any other document includes the document as novated, varied or replaced and despite any change in the identity of the parties;
- (ix) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes fax transmissions;
- (x) this document includes all schedules and annexures to it;
- (xi) a clause, schedule or annexure is a reference to a clause, schedule or annexure, as the case may be, of this document; and
- (xii) a requirement for a Party to act in 'good faith' does not require that party to act contrary to its own commercial considerations.
- (g) where time is to be calculated by reference to a day or event, that day or the day of that event is excluded.

#### 1.3 Headings

Headings do not affect the interpretation of this document.

#### 2 Term

#### 2.1 Initial Period

This Agreement commences on the Effective Date, and continues until 30 June 2010 unless otherwise terminated in accordance with its terms.

#### 2.2 Termination

This Agreement may be terminated by:

- (a) agreement in writing between the parties to terminate the Agreement on a particular date;
- (b) a party under clause 12.

# 3 Service

#### 3.1 Supply of Service

Commencing on the Effective Date, and continuing during the Term, SunWater must provide the Service to Sequater on the terms of this Agreement.

#### 3.2 Service requirements

The service requirements are described in the Service Schedule attached to this Agreement.

SunWater must:

- (a) Provide the Service in accordance with the Service Schedule;
- (b) provide the Service to Seqwater using appropriately qualified and experienced personnel; and
- (c) act in accordance with reasonable directions from Seqwater in respect of SunWater's performance of the Service.

#### 3.3 Standard of Service

SunWater shall perform the Service in a diligent manner and to a standard which is, at a minimum, the higher of:

- (a) the standard to which the Service was performed over the 24 months prior to the Effective Date;
- (b) the standard of skill and care expected of a contractor experienced in the provision of the Service.

#### 3.4 Cooperation

In performing the Service, SunWater must, and must ensure that its Personnel:

- (a) cooperate with Seqwater and its Personnel;
- (b) report to Seqwater's relevant Personnel any problems encountered that SunWater considers (acting reasonably) materially:
  - (i) affect Seqwater's operational capabilities; or
  - (ii) impact upon this Agreement or the Services provided; and
- (c) observe and comply with all lawful requests, directions and instructions which are made by Seqwater's relevant Personnel (acting reasonably).

#### 3.5 Security and access

- (a) Each party must ensure that its Personnel who are at the premises of the other party in connection with the provision or receipt of the Service comply with the other party's then current:
  - (i) security requirements; and
  - (ii) workplace health and safety policies.
- (b) A party may refuse personnel access to its premises, or require Personnel to leave its premises, if they do not comply with the requirements in this clause 3.5.
- (c) Subject to clause 3.5(d), a party must provide the other party with at least 7 days prior written notice of any change to that party's security requirements or workplace health and safety policies or procedures.

(d) In circumstances where a party identifies an imminent or serious risk with respect to workplace health and safety that necessitates a change in its workplace health and safety policies or procedures, it may give the other party immediate notice of the change, and the other party will take all reasonably practicable steps to ensure its Personnel engaged in providing the Service at the premises of the other party comply with the changed procedure or policy.

#### 3.6 Subcontracting

- (a) SunWater must not subcontract the performance of, or otherwise arrange for another entity (other than its own employees) to perform the Service without Seqwater's prior written consent (which must not be unreasonably withheld).
- (b) If SunWater subcontracts the performance of the Service, SunWater is responsible for the acts or omissions of its subcontractors in the course of performing the Service as if they were SunWater's own acts or omissions.
- (c) Nothing in this clause 3.6 affects any contract entered into by SunWater prior to the date of this Agreement.

#### 3.7 Exclusion of Personnel

- (a) Seqwater may exclude at any time by written notice to SunWater any person engaged by SunWater to provide the Service if Seqwater reasonably believes that person is unsuitable to carry out the Service, or if that person is not performing their duties to the reasonable satisfaction of Seqwater.
- (b) This clause 3.7 does not affect SunWater's responsibility for the performance of its obligations under this Agreement, or for the acts and omissions of any person engaged by it to perform the Service.

#### 3.8 Equipment

Unless otherwise agreed between the parties, SunWater must at its own cost provide all the materials, equipment, consumables and utilities (including electricity) reasonably necessary to perform the Service.

## 4 Reporting

#### 4.1 Reporting

SunWater must provide such reporting and documentation in respect of the Service, as outlined in the Service Schedule.

#### 5 Records

#### 5.1 Maintenance of Records

SunWater must maintain records, including timesheets or other method of recording time and records of all activities and all costs, expenses and

overhead in respect of which Fees are payable. The records to be maintained under this clause 5.1 include all records reasonably necessary enable Seqwater to confirm that the Fees have been calculated in accordance with the Agreement and otherwise to evidence the proper performance of SunWater's obligations under, and in compliance with, this Agreement.

#### 5.2 Retention of records

SunWater must retain all records required to be maintained by clause 5.1 for at least seven years from the date on which the record was created.

#### 5.3 Seqwater to have access

To the extent permitted by law, SunWater will, upon reasonable prior written notice, allow and authorise Seqwater to have reasonable access to SunWater's records and archives relating to the Service (including records and archives in relation to activities similar to the Services undertaken by the SunWater on its own account, or for SunWater by third parties, prior to the Effective Date) for purposes related to the transactions contemplated by this Agreement.

#### 5.4 SunWater to have access

If any records or archives are transferred to Seqwater, then Seqwater will allow and authorise SunWater to have access to those records and archives for the purpose of providing the Service under this Agreement.

#### 5.5 Records management agreement

If the parties enter into a separate records access agreement in relation to access to SunWater's records and archives by Seqwater, then that Agreement shall apply to the exclusion of clauses 5.3 and 5.4.

## 6 Payments

#### 6.1 Fees

During the Term Seqwater must pay the Fees contained in the Service Schedule to SunWater on the terms of this Agreement, provided that, Seqwater (acting reasonably) will not be obliged to pay that part of the Fees where the Service has not been provided or completed in accordance with this Agreement.

#### 6.2 Invoice

Unless otherwise agreed between the parties, SunWater will invoice Seqwater monthly in arrears in respect of the Fees payable by Seqwater.

#### 6.3 Supporting documentation

SunWater will provide supporting documentation and information related to an invoice under this Agreement.

#### 6.4 Disputes

If Seqwater queries or disputes a fee included in an invoice, SunWater may reimburse Seqwater for any overpayments if the invoice is found to be in error.

#### 6.5 Payment

Subject to clause 6.3 and clause 6.4, if SunWater issues a correctly rendered invoice to Seqwater in accordance with this Agreement, then Seqwater must pay that invoice within 30 days after receiving it.

If Seqwater fails to make payment on the due date for payment in accordance with this clause, such payment shall bear interest at the rate of interest equal to the Suncorp-Metway Limited variable business lending rate applicable from time to time plus two percent (2%) and if at any time this rate ceases to be published, then such other suitable replacement bank rate per annum as may be determined after request by SunWater or Seqwater by a nominee of the President of the Institute of Chartered Accountants in Australia (Queensland Branch), or such other rate agreed between the Parties.

# 7 Intellectual Property Rights

#### 7.1 Material

- (a) If SunWater develops New Material in the course of providing the Service to Seqwater under this Agreement, then SunWater will retain all rights, title and interest in that New Material.
- (b) This **clause 7.1** does not affect the ownership of Intellectual Property Rights in any Existing Material.

#### 7.2 Non-infringement warranty

SunWater warrants that, to the best of its actual knowledge as at the Effective Date, the exploitation by Seqwater of Material provided by SunWater in the course of providing the Service does not infringe the Intellectual Property Rights of any other person.

# 8 Confidentiality

#### 8.1 No unauthorised use or disclosure

A party must not, during or after the Term, use the other party's Confidential Information for any purpose other than the provision of the Service, nor disclose or authorise the disclosure of any such information to any other entity except:

- (a) with the other party's prior written consent;
- (b) as required by law; or
- (c) to the first party's Personnel and professional advisors (Additional Disclosees) on a need-to-know basis for the purposes of this Agreement.

#### 8.2 Additional Disclosees

(a) If a party discloses the other party's Confidential Information to any Additional Disclosee, that party must ensure that all such Additional Disclosees keep that information confidential on the terms provided in clause 8.1.

(b) That party must, on request by the other party, arrange for any Additional Disclosee to execute a document in a form reasonably required by the other party to protect confidentially of the information.

#### 8.3 Breach of confidentiality

If a party becomes aware of a suspected or actual breach of this **clause 8** by the other party or an Additional Disclosee, that party must immediately notify the other party and take reasonable steps required to prevent the suspected or actual breach.

#### 8.4 Return of Confidential Information

Each party must return or destroy Materials containing the other party's Confidential Information which are in the first party's possession or control when:

- (a) directed by the other party;
- (b) those Materials are no longer required by the first party; or
- (c) this Agreement ends (unless otherwise agreed by the parties).

#### 8.5 Information Privacy

Each party must comply with the Privacy Law in relation to any Personal Information disclosed to or collected by it in the course of exercising its rights or performing its obligations under this Agreement.

# 9 Liability

#### 9.1 Limitation of Liability

Subject to clause 9.2 and excluding any liability arising as a result of SunWater's negligent act or omission or breach of this Agreement, SunWater's liability to Seqwater arising out of the performance or non-performance of the Services, whether under the law of contract, tort or otherwise, shall be limited to the Fees. Nothing in this clause shall be read or applied so as to purport to exclude, restrict or modify, or have the effect of excluding, restricting or modifying the application in relation to the performance of the Services pursuant to this Agreement.

#### 9.2 Consequential loss excluded

Neither party shall be liable to the other for any indirect or consequential loss, or loss of revenue, profit or anticipated savings, or loss, damage or destruction of data.

#### 9.3 Contribution of other party

A party's liability to the other party is reduced to the extent (if any) that the other party causes or contributes to the relevant loss.

#### 10 Insurance

#### 10.1 SunWater insurance policies

SunWater must maintain during the Term (and, in the case of the professional indemnity insurance, for three years after the expiration of the Term):

- (a) public liability and product liability insurances of at least \$20 million;
- (b) professional indemnity insurance of at least \$20 million; and
- (c) workers' compensation insurance as required by law.
  with a reputable insurer which is reasonably satisfactory to Seqwater.

#### 10.2 Evidence of insurance

SunWater must, on request of Seqwater, provide Seqwater with certificates of currency for the required insurances.

## 11 Dispute resolution

#### 11.1 Informal resolution of disputes

Each party shall endeavour to resolve any Dispute with the other by direct negotiation, in good faith, between the relevant officers of the parties.

#### 11.2 Dispute Notice

If there is a Dispute between the parties which is not resolved under clause 11.1, then a party may send the other party a notice (**Dispute Notice**) setting out the issues in Dispute between them.

The parties' respective chief executive officers must meet to discuss and endeavour to resolve the Dispute within 14 days after receipt of a Dispute Notice.

### 11.3 No litigation in absence of process

The applicable procedures in this clause 11 are conditions precedent to the commencement of any litigation in relation to a Dispute referred to in this clause 11.

A party may, however, seek interlocutory relief in respect of any such Dispute from any court having jurisdiction.

# 12 Termination for default

A party may immediately terminate this Agreement by written notice to the other party if:

(a) the other party does not carry out any material obligation under this Agreement and, in the case of a default which is capable of remedy, does not remedy that default within 20 Business Days after the party serves notice on the other party requiring the default to be remedied; or (b) an Insolvency Event occurs in relation to the other party.

#### 13 Notices

#### 13.1 General

A notice, demand, certification, process or other communication relating to this Agreement must be in writing in English and may be given by an agent of the sender.

#### 13.2 How to give a communication

In addition to any other lawful means, a communication may be given by being:

- (a) personally delivered;
- (b) left at the party's current address for notices;
- (c) sent to the party's current address for notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or
- (d) sent by fax to the party's current fax number for notices.

#### 13.3 Particulars for delivery of notices

(a) The particulars for delivery of notices are initially:

SunWater:

Address:

Level 10, 179 Turbot Street

Brisbane QLD 4000 PO Box 15536

City East QLD 4002

Fax:

Attention:

Chief Executive Officer

Seqwater:

Address:

Level 3, 240 Margaret Street

Brisbane QLD 4000 PO Box 16146

City East Q 4002

Fax:

Attention:

Peter Borrows

(b) Each party may change its particulars for delivery of notices by notice to each other party.

#### 13.4 Communications by post

A communication is given if posted:

- (a) within Australia to an Australian address, three Business Days after posting; or
- (b) in any other case, ten Business Days after posting.

#### 13.5 Communications by fax

- (a) A communication is given if sent by fax, when the sender's fax machine produces a report that the fax was sent in full to the addressee.
- (b) That report is evidence that the addressee received the fax in full at the time indicated on that report.

#### 13.6 After hours communications

If a communication is given:

- (a) after 5.00 pm in the place of receipt; or
- (b) on a day which is a Saturday, Sunday or bank or public holiday in the place of receipt,

it is taken as having been given at 9.00 am on the next day which is not a Saturday, Sunday or bank or public holiday in that place.

#### 14 GST

#### 14.1 Construction

In this clause 14:

- (a) words and expressions which are not defined in this Agreement but which have a defined meaning in the GST Law have the same meaning as in the GST Law; and
- (b) **GST Law** has the same meaning given to that expression in the A New Tax System (Goods and Services Tax) Act 1999.

#### 14.2 Consideration GST exclusive

Unless otherwise expressly stated, all prices or other sums payable or consideration to be provided under this Agreement are exclusive of GST.

#### 14.3 Payment of GST

If GST is payable by a party or by the representative member for a GST group of which the party is a member, on any supply made under this Agreement, the other party will pay to the first party an amount equal to the GST payable on the supply.

#### 14.4 Timing of GST payment

The other party will pay the amount referred to in **clause 14.3** in addition to and at the same time that the consideration for the supply is to be provided under this Agreement.

#### 14.5 Tax invoice

(a) The first party must deliver a tax invoice or an adjustment note to the other party before the first party is entitled to payment of an amount under clause 14.3.

(b) The other party can withhold payment of the amount until the first party provides a tax invoice or an adjustment note, as appropriate.

#### 14.6 Adjustment event

If an adjustment event arises in respect of a taxable supply made by a party under this Agreement, the amount payable by the other party under **clause 14.3** will be recalculated to reflect the adjustment event and a payment will be made by one party to the other as the case requires.

#### 14.7 Reimbursements

Where a party is required under this Agreement to pay or reimburse an expense or outgoing of another party, the amount to be paid or reimbursed by the first party will be the sum of:

- (a) the amount of the expense or outgoing less any input tax credits in respect of the expense or outgoing to which the other party, or to which the representative member for a GST group of which the other party is a member, is entitled; and
- (b) if the payment or reimbursement is subject to GST, an amount equal to that GST.

#### 15 General

#### 15.1 Legal costs

Except as expressly stated otherwise in this Agreement, each party must pay its own legal and other costs and expenses of negotiating, preparing, executing and performing its obligations under this Agreement.

#### 15.2 Amendment

This Agreement may only be varied or replaced by a document executed by the parties.

#### 15.3 Waiver and exercise of rights

- (a) A single or partial exercise or waiver by a party of a right relating to this Agreement does not prevent any other exercise of that right or the exercise of any other right.
- (b) A party is not liable for any loss, cost or expense of the other party caused or contributed to by the waiver, exercise, attempted exercise, failure to exercise or delay in the exercise of a right.

#### 15.4 Rights cumulative

Except as expressly stated otherwise in this Agreement, the rights of a party under this Agreement are cumulative and are in addition to any other rights of that party.

#### 15.5 Consents

Except as expressly stated otherwise in this Agreement, a party may conditionally or unconditionally give or withhold any consent to be given under this Agreement and is not obliged to give its reasons for doing so.

#### 15.6 Further steps

Each party must promptly do whatever the other party reasonably requires of it to give effect to this Agreement and to perform its obligations under it.

#### 15.7 Governing law and jurisdiction

- (a) This Agreement is governed by and is to be construed in accordance with the laws applicable in Queensland.
- (b) Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts exercising jurisdiction in Queensland and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

#### 15.8 Assignment

- (a) A party must not assign or deal with any right under this Agreement without the prior written consent of the other party.
- (b) Any purported dealing in breach of this clause is of no effect.

#### 15.9 Counterparts

This Agreement may consist of a number of counterparts and, if so, the counterparts taken together constitute one document.

#### 15.10 Entire understanding

- (a) This Agreement contains the entire understanding between the parties as to the subject matter of this Agreement.
- (b) All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this Agreement are merged in and superseded by this Agreement and are of no effect. Neither party is liable to the other party in respect of those matters.
- (c) No oral explanation or information provided by a party to another:
  - (i) affects the meaning or interpretation of this Agreement; or
  - (ii) constitutes any collateral agreement, warranty or understanding between the parties.

#### 15.11 Relationship of parties

This Agreement is not intended to create a partnership, joint venture or agency relationship between the parties.

## 15.12 Survival of terms

Notwithstanding the expiration or termination of this Agreement for any reason, clauses 5, 6.3, 7, 8, and 14 shall survive and continue in force.

# Executed as an Agreement.

Cinned on a Dhad	-	t k s	•		
Signed as a Deed.					
Signed on behalf of					
QUEENSLAND BULK WATER SUPPLY	) (			•	
<b>AUTHORITY</b> ABN 75450239876	)				
by its duly authorised representative,	1 Fear	Peter Bor	rows		
Peter Borrows, Chief Executive Officer.	)				
Teter Borrows, Orner Excedence Cinesia	)				
in the presence of:	)			•	
iii the presence of.	,				
Signature of Witness					•
Signature of Withoss					
Name of Witness (print)					
Traine of trainess (print)					
•					
Signed for and on behalf of SUNWATER	).				
LIMITED ACN 131 034 985 by its Chief	)				
Executive Officer under Power of Attorney	)				
No. 711767649 who warrants that the Power	)				
of Attorney is valid and has not been revoked	)	Peter Boo	ettcher	•	
•					
in the presence of:	)				
Signature of Witness					
•					
Name of Witness (print)					

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# FLOOD MANAGEMENT SERVICES

# FOR

WIVENHOE, SOMERSET AND NORTH PINE DAMS

# TABLE OF CONTENTS

1	GENERAL	3
SCOP	e of Work	3
SIINV	VATER'S ORGANISATION	•••
EMER	CENCY ACTION PLANS	3
STAN	DING OPERATING PROCEDURES	3
FLOO	D OPERATION MANUALS	4
WOR	KPLACE HEALTH AND SAFETY	4
ENVI	RONMENTAL MANAGEMENTTY MANAGEMENT	4
OHAL	TTY MANAGEMENT	4
Doct	MENT CONTROL AND STORAGE	. 4
2	TRAINING	6
3	PLANNED MAINTENANCE	•• /
4	UNPLANNED MAINTENANCE	. 8
	GENCY MAINTENANCE	8
NON-	EMERGENCY MAINTENANCE	9
5	FLOOD PLANNING AND FLOOD CONTROL CENTRE	10
	RAL	10
DATA	COLLECTION	11
DATA	TIME FLOOD MODEL	11
KEAL	D PREPAREDNESS	12
	FLOOD OPERATIONS AND REPORTING	14
6	D OPERATION	14
FLOO	D OPERATION	15
FLOO	D EVENT REPORTPAYMENT FOR SERVICES	16
7	PAYMENT FOR SERVICES	·U

#### 1 GENERAL

#### Scope of Work

SunWater shall provide flood management services for Wivenhoe, Somerset and North Pine Dams in accordance with the provisions of this Service Schedule, the Emergency Action Plans, Standing Operating Procedures, the Flood Operations Manuals.

#### SunWater's Organisation

SunWater will provide the following information in relation to the provision of services:

- · Organisation Chart.
- Name, curriculum vitae and contact details for nominated Duty Flood Engineers.
- Name and contact details for nominated flood duty staff.
- Name and contact details for any sub-contractors together with details of functions to be carried out by the sub-contractor.

Should SunWater have a requirement to change organisational arrangements, it shall immediately submit details of and reasons for such changes to SeqWater.

#### **Emergency Action Plans**

Emergency Action Plans (**EAPs**) detail procedures to be followed in the event that safety problems are developing at a dam arising from any cause or event including floods. Separate EAPs have been prepared for:

- Wivenhoe Dam and Somerset Dam
- North Pine Dam

Arising from changes of SunWater's personnel there may be a requirement to amend the Register of Contact persons within an EAP. SunWater shall promptly comply with the requirements of the EAPs for notification of any such changes.

Seqwater is responsible for document control of EAPs. SunWater shall comply with the requirements of the EAPs.

### **Standing Operating Procedures**

A Manual of Standing Operating Procedures (**SOPs**) details procedures to be followed in both the normal operation of a dam and during periods of flooding or high risk operation. Separate SOPs have been prepared for each dam.

In July each year SunWater shall review the SOPs and advise Seqwater, in writing of either:

- c any improvements recommended for SOPs, or
- confirmation that SOPs remain satisfactory.

Seqwater is responsible for document control of SOPs. SunWater shall comply with the requirements of the Standing Operating Procedures.

#### Flood Operations Manuals

The Flood Operations Manuals set out detailed procedures and working instructions that are to be followed by SunWater during a flood event. In July each year SunWater shall review the Flood Operation Manuals and advise Sequater, in writing, of either:

- · any improvements recommended for the Manuals, or
- · confirmation that the Manuals remain satisfactory.

Seqwater is responsible for document control of the Manuals and obtaining any necessary approval under the *Water Supply (Safety and Reliability) Act 2008* (Qld). SunWater must comply with the requirements of the Manuals.

### Workplace Health and Safety

SunWater shall have a quality accredited Workplace Health and Safety Management System in accordance with ISO 4801 for all activities and services carried out under the Agreement.

#### **Environmental Management**

SunWater shall have a quality accredited Environmental Management System in accordance with ISO 14001 for all activities and services carried out under the Agreement.

#### Quality Management

SunWater shall have a quality accredited Quality Management System in accordance with ISO 9001 for all activities and services carried out under the Agreement.

#### **Document Control and Storage**

Seqwater will provide to SunWater, as soon as practicable after execution, an original and five copies of the Agreement.

Seqwater will also provide to SunWater three copies of each of the following documents:

Wivenhoe Dam and

**Emergency Action Plan** 

Somerset Dam Manual of Flood Operational Procedures

Wivenhoe Dam Standing Operating Procedures

Somerset Dam Standing Operating Procedures

North Pine Dam Emergency Action Plan

#### 2 TRAINING

SunWater shall ensure that only staff and subcontractors who have been adequately trained, specifically in relation to the tasks to be undertaken under the Agreement, are permitted to perform the Service.

During the performance of the services SunWater shall provide additional training for:

- new staff or subcontractors' Personnel.
- reinforcement or enhancement of training
- real time flood model and flood operations

Payment for training required during the performance of the Service shall be covered by the total annual cost specified in clause 7 of this Schedule.

#### 3 PLANNED MAINTENANCE

In February each year, SunWater shall review the operation of the Flood Control Centre and Flood Alert Network and prepare an annual report on upgrade and maintenance requirements for the following financial year. This information shall be presented to Seqwater and Seqwater will issue to SunWater before the end of May each year an approved planned maintenance program. This program will confirm the planned maintenance tasks to be carried out by SunWater in the coming year.

Seqwater is not bound to accept any offers for planned maintenance prepared by SunWater. Seqwater is also not bound to use SunWater in any role for any planned maintenance other than the approved planned maintenance program and reserves the right to make other arrangements to carry out other maintenance at its sole discretion.

Payment for approved planned maintenance program will be in accordance with the relevant approved financial arrangements advised in writing by Seqwater. Depending on the nature of work to be carried out under this item such financial arrangements could include lump sums, dayworks, nominated sub-contracts and sub-contractors both with management fees for SunWater or a combination thereof. Such arrangements shall be as proposed by SunWater in the Annual Report on Planned Maintenance or as otherwise agreed.

Payment for preparing the Annual Report for discussions and negotiations on the approved program for planned maintenance shall be covered by the total annual cost specified in clause 7 of this Schedule.

#### UNPLANNED MAINTENANCE

## **Emergency Maintenance**

In the event of failure of or damage to any equipment or other components within the Flood Control Centre or Flood Alert Network that results in a situation that is unsafe for personnel of SunWater, sub-contractors or Seqwater or for any member of the public or places any of the assets of Seqwater or other affected parties at risk, SunWater shall immediately take all steps necessary to eliminate, or reduce the risk as far as is reasonably possible, or reinstate the component to a safe condition.

SunWater shall ensure that relevant authorities and responsibilities for its key staff are implemented so that staff respond to emergency situations in an effective and timely manner.

Seqwater shall be advised of an emergency situation as soon as practicable after the situation arises. Nevertheless the requirements to respond to an emergency to protect personnel and the public and to ensure asset security shall take precedence over notifying Seqwater.

SunWater shall, in managing the response to an emergency situation, act to limit the costs incurred to those costs that are reasonable.

Where expenditure on any emergency maintenance activity is likely to exceed \$10,000 SunWater shall endeavour to seek confirmation of Segwater's approval for each activity before it is implemented.

Immediately after an emergency situation has ended SunWater shall prepare and submit a report to Seqwater.

Payment for emergency maintenance shall be as follows:

- Payment for SunWater's Personnel shall be at the applicable hourly rates contained in clause 7 of this Schedule for the actual hours involved in the emergency situation, including hours paid to SunWater's personnel under applicable industrial awards for standby, callout or minimum duty and including preparation of report on emergency maintenance.
- Payment for sub-contractors or other services shall be at the actual cost incurred by SunWater.
- Payment for materials or supplies shall be at actual cost.

#### Non-emergency Maintenance

In the event that during the Term there is a failure of equipment or a situation arises which necessitates repair or modification of any equipment or other assets which situation is not an emergency situation, but is not appropriate to delay and include in the planned maintenance program, SunWater shall implement within a reasonable period of time the following action:

- If the estimated cost of the remedial action is less than \$1,000
   SunWater shall proceed forthwith to repair the equipment or remedy the situation.
- If the estimated cost of the remedial action is \$1,000 or more SunWater shall report the situation to Seqwater together with a quotation for remedial work and with description of the work proposed. Upon receipt of Seqwater's approval SunWater shall carry out the approved remedial work.

Details of all non-emergency unplanned maintenance shall be included in SunWater's monthly report. Payment for non-emergency maintenance shall be as follows:

 Payment shall be as approved by Seqwater when responding to SunWater's report and quotation for such work. Depending on the nature of the work to be carried out, the financial arrangements for such work could include lump sums, dayworks, nominated subcontracts and sub-contracts both with management fees for SunWater or a combination thereof.

# FLOOD PLANNING AND FLOOD CONTROL CENTRE

#### General ·

SunWater shall be prepared to competently deal with flood events in accordance with the requirements of the SOPs, the EAPs and the Flood Operations Manuals.

SunWater shall establish a dedicated Flood Control Centre. SunWater shall maintain the Centre in good operating order at all times throughout the Term.

The Flood Control Centre shall be located:

- In an area in Brisbane where reliable reception of telemetry of ALERT data from Mt Glorious repeater station is available
- On land not subject to flood inundation and where reasonable access during major flood events is available
- In an area reasonably accessible to key staff during major flood events.

In the event that the location adopted by SunWater necessitates additional repeater stations for radio telemetry of ALERT data, such additional stations shall be provided by SunWater at SunWater's cost.

As an absolute minimum the Flood Control Centre shall include:

- a dedicated area within premises occupied by SunWater with appropriate locks for security
- workstations for 3 persons
- adequate storage for relevant documents
- climate control operating 24 hours per day, 7 days per week
- communications facilities including telephone, facsimile and radio base station with links to each dam
- emergency standby power facilities, capable of continuously operating the Centre and its equipment, including climate control
- uninterruptible power supply for all computer equipment with minimum 2 hour capacity
- accommodation/facilities to allow staff to remain at the centre on a 24 hour basis in a major flood emergency
- adequate room to comfortably operate hardware and software supplied by Seqwater.

Access to the Flood Control Centre shall be restricted to members of SunWater's project team and other persons authorised by Seqwater and notified in advance to SunWater.

If the Flood Control Centre is located at premises occupied by SunWater, Seqwater will ensure that its employees and subcontractors:

- use entrances and exits nominated by SunWater;
- comply with those security measures directed by SunWater;
- carry suitable identification;
- do not examine, copy, remove or otherwise interfere with anything on the premises, except in accordance with this Agreement;
- comply with the reasonable directions of SunWater pertaining to the premises, and workplace health and safety;
- reinstate the premises if any damage is caused as a result of their access.

Payment for providing the Flood Control Centre, including provision of space, furniture, equipment, ancillary computers and services shall be covered by the total annual cost specified in clause 7 of this Schedule.

#### **Data Collection**

Seqwater has installed a network of hydrologic instruments which record in real time a range of data including rainfall and reservoir and river levels. The system is known as ALERT and will be maintained in good operating order by Seqwater. The ALERT data is available through telemetry to support the Real Time Flood Model.

Other data sources which SunWater shall access, as required, include:

- Department of Environment and Resource Management
- Bureau of Meteorology

SunWater shall, at intervals not exceeding one week, check the ALERT system to ensure it is functioning. ALERT checking shall include validation of all data received since the previous checking and validation. Seqwater shall be promptly notified, in writing, which may be by email, of any breakdowns or other defects in the ALERT system.

When probability of spill is high for modest rainfall events and rain is forecast by Bureau of Meteorology, SunWater shall check the ALERT and RFTM system and validate data at key stations on at least a daily basis and more often if necessary to ensure timely response once a flood event has been initiated.

Payment for checking and validating data, and testing ALERT system and RTFM except during a flood event, shall be covered by the total annual cost specified in clause 7 of this Schedule.

#### Real Time Flood Model

Seqwater will supply to SunWater a real time flood model (RTFM). This system was developed to facilitate the operation of the dams in accordance with the SOPs and the Flood Operations Manuals.

Sequater will provide to SunWater hardware and software to enable the RTFM to be operated in the Flood Control Centre.

SunWater shall make all arrangements and connections to link the RTFM in the Flood Control Centre to the ALERT system and to the backup RTFM. The cost of the necessary connections will be separately reimbursed by Seqwater at cost. Payment for SunWater's staff involved in arranging and supervising connections and installation of RTFM hardware will be at applicable Dayworks Rates.

During the Term Seqwater may require that the RTFM also be connected to a backup Flood Control Centre. Any costs incurred by SunWater in arranging and supervising any such connection will be at applicable Dayworks Rates.

SunWater shall ensure that the flood response teams for the Flood Control Centre are fully familiar with all the capabilities of the RTFM and are capable of maintaining the RTFM and its connections in operational order and using the RTFM to its full extent during flood events.

Payment for SunWater's involvement with the RTFM shall be as follows:

- for support, maintenance, and intermittent training during the Term, payment shall be covered by the total annual cost specified in clause 7 of this Schedule.
- for annual refresher training as part of annual preparedness payment shall be covered by the total annual cost specified in clause 7 of this Schedule.
- for use during a flood event, payment shall be as set out in clause 4
  of this Schedule.

## Flood Preparedness

Preparation by SunWater, to deal with flood events shall include:

preparation of a program, in conjunction with Seqwater, which shall
be finalised prior to 31 July each year and which sets out the training
schedule for all flood response team members. The flood response
team includes all SunWater's operators and flood control centre staff
and other staff required to respond to flood events at any of the
dams. This program shall also state the names of all staff proposed
at each dam and at the flood control centre and the names of any
backup flood response team members.

- training of all flood response team members in conjunction with Seqwater prior to 30 September each year. No flood response team members shall provide services at a dam or flood control centre during a flood event if this training has not been satisfactorily completed. Training of flood centre staff shall include simulation of real past events and events up to and including the probable maximum flood with all staff operating at their designated work stations during the training. The RTFM contains a module for these simulations. The simulations shall include:
  - · adjustment of flood forecasts due to revised rainfall estimates
  - assessment of capacity to maintain public access at downstream river crossings (for small and medium flood events only) by fine tuning of releases
  - testing of all communications systems
  - procedures for handover at change of shift
  - completion of all logs and other documentation.

Prior to 30 September each year SunWater shall submit to Seqwater a formal Statement of Preparedness. This statement shall include:

- an outline of the training given to the flood response team members
- the names of all flood response team members who have satisfactorily completed training
- an assurance to Seqwater that SunWater is prepared to deal with any flood event
- an assurance that all management and communication channels to be used in a flood event are unambiguous and effective and have been recently tested and found to be satisfactory
- an assurance that all manuals and procedures relating to flood operations have been checked and are correct.

At intervals not exceeding one month SunWater shall ensure that the RTFM remains capable of communicating effectively with the ALERT system. This frequency shall increase when rainfall is forecast and probability of spill is high.

The Bureau of Meteorology currently provides a rainfall service and paging service to warn of storm events. SunWater shall make the necessary arrangements with the Bureau to ensure a continual storm warning service is available to SunWater.

Payment for flood preparedness shall be covered by the total annual cost specified in clause 7 of this Schedule.

# FLOOD OPERATIONS AND REPORTING

#### Flood Operation ...:

SunWater shall perform flood operations during flood events in accordance with the relevant provisions of EAPs and SOPs, which refer to the Flood Operations Manuals.

SunWater shall ensure that adequate arrangements are in place within SunWater's organisation to ensure that storm warnings are responded to promptly including notification of key staff required for flood operations at each dam, at the Flood Control Centre and elsewhere.

SunWater, in conjunction with Seqwater, shall mobilise flood response teams to attend each relevant dam and the Flood Control Centre when:

- for Wivenhoe Dam indications are received of an imminent flood which may require flood releases.
- for Somerset Dam indications are received of a significant inflow which may require flood releases.
- for North Pine Dam heavy rain is experienced in the dam's catchment area.

The flood response teams shall report to the dams or Flood Control Centre, as applicable, within the response times prescribed in the SOPs. Sufficient standby teams shall be available to ensure continuous around the clock operation.

Unless otherwise approved by Seqwater, flood response teams per shift shall comprise a Senior Flood Operations Engineer and/or Flood Operation Engineer and sufficient hydrographers/modellers and data checkers to manage operational requirements.

The flood response team shall be sufficiently qualified and trained as prescribed in the relevant SOP's and the flood operation procedures contained in the Flood Operations Manuals. As detailed in Section 5 of this Service Schedule, no staff member shall provide services at a dam during flood operations without having undergone the relevant training within the previous year.

Unless otherwise approved by Seqwater, the flood response team shall remain on duty until the reservoir levels have returned to full supply level and flood operations have ceased.

Payment for SunWater's personnel involved in flood operations at the dams, the Flood Control Centre or elsewhere shall be made at the applicable hourly rates contained in clause 7 of this Schedule for the actual hours involved in the flood event.

Seqwater will also reimburse SunWater for the actual cost of:

- accommodation and meals, if any
- taxis, if any, from home to FCC and return.

### Flood Event Report

During the drainage phase of a flood event, the Duty Engineer(s), assisted as appropriate by hydrographers/modellers, shall commence preparation of a Flood Event Report. The Report shall be completed and submitted to Seqwater within 2 weeks of the end of the flood event and shall include:

- the storage situation prior to the event.
- the weather situation.
- involvement of flood response teams.
- · details of data collection.
- Communications during the event.
- performance of real time flood model
- flood modelling and management strategies
- a quantification of the flood mitigation benefits of the dams during the event.
- proposed changes (if necessary) to Flood Operations Manuals.

Appendices within the report shall include:

- Flood Control Centre event logs
- representative cumulative rainfall and IFD curves
- catchment rainfalls
- inflow and outflow hydrographs
- attendance records of food response teams.

For small flood events of short duration and modest peak discharges abridged versions of Flood Event Reports will be sufficient. The section of the Flood Event Report on details of data collection shall cover all sources of data accessed for the given event and may include:

- ALERT network
- Department of Environment and Resource Management Telephone Telemetry System
- BoM weather forecasts and warnings
- BoM Quantitative Precipitation Forecasts
- Manually observed reservoir levels and river heights.

Payment for Sunwater's personnel involved in preparation of Flood Event Report shall be made at the applicable hourly rates contained in the Dayworks Schedule for actual hours involved in preparation of the report.

#### 7 PAYMENT FOR SERVICES

The total annual cost to maintain the Service, in accordance with the Contract, is \$466,733 per annum, with flood events to be paid for on an hourly rate basis in accordance with the schedule of rates.

# Schedule of Rates

Rate*
-
_

<sup>\*</sup> a combination of standard hourly rates and overtime rates are used during flood events.



**DEED OF VARIATION AND EXTENSION No. 4** 

# TABLE OF CONTENTS

1	Interpretation		1
2	Variation		1
3	Term		1
4	Confirmation		2
5	General		2
6	Governing Law		2
Sch	nedule 1		3

#### Deed of Variation and Extension No. 4

Date:

day of

2011

**Parties** 

Between

QUEENSLAND BULK WATER SUPPLY AUTHORITY trading as SEQWATER ABN 75 450 239 876 of 240 Margaret Street, Brisbane, Queensland, 4000 ('Seqwater')

and

**SUNWATER LIMITED** ACN 131 034 985 of 179 Turbot Street, Brisbane, Queensland, 4000 ('SunWater')

#### Recitals

- Seqwater and SunWater were parties to a Service Level Agreement Flood Management Services Agreement dated 13 October 2009 ("the Agreement").
- 2. In July 2009, the Agreement was varied by a Deed of Variation and Extension dated 29 July 2010 ("**Deed of Variation and Extension No.1**") which extended the expiry date of the Agreement from 30 June 2010 to 31 July 2010.
- 3. In September 2010 the Agreement was varied by a second Deed of Variation and Extension dated 30 September 2010 ("Deed of Variation and Extension No.2") which extended the expiry date of the Agreement from 31 July 2010 to 31 October 2010.
- 4. In December 2010 the Agreement was varied by a third Deed of Variation and Extension dated 24 December 2010 ("Deed of Variation and Extension No.3") which extended the expiry date of the Agreement from 31 October 2010 to 28 February 2011.
- 5. Seqwater and SunWater have agreed to further vary the expiry date of the Agreement in accordance with the terms of this Deed.

#### The parties agree as follows:

#### 1 Interpretation

Words and phrases defined in the Agreement and the Deed of Variation and Extension have the same meaning when used in this Deed.

#### 2 Variation

The parties agree that on and from the date of this Deed, the Agreement is varied in the manner set out in Schedule 1.

#### 3 Term

The parties acknowledge and agree that the Initial Period (as that phrase is defined in the Agreement and extended by Deed of Variation and Extension No.1, Deed of Variation and Extension No.2 and Deed of Variation and Extension No.3) is extended for a further one (1) calendar month from 28 February 2011 to 31 March 2011.

#### 4 Confirmation

The parties agree that the Agreement, as amended by the Deed of Variation and Extension and this Deed, continues to be in full force and effect.

#### 5 General

Each party is responsible for its own costs associated with this Deed.

#### 6 Governing Law

This Deed is governed by the law in force in the State of Queensland.

#### Executed as a Deed

ABN 75 450 239 876 by it authorised representative	Signature of authorised representative
	+ PETER BORROWS
Signature of witness	Name of authorised representative (print)
	CHIEF EXECUTIVE OFFICER
ame of witness (print)	Office held
-1/22/4	<b>←</b>
Oate (print)	<b>←</b>
Or/O3/II Date (print)	<del></del>
	<u>←</u>
Date (print)  Signed for SUNWATER LIMITE	
Date (print)  Signed for SUNWATER LIMITE  131 034 985 by an authorised of	icer in
Date (print)  Signed for SUNWATER LIMITE  31 034 985 by an authorised of	
Date (print)  Signed for SUNWATER LIMITE	icer in
eate (print)  igned for SUNWATER LIMITE 31 034 985 by an authorised of the presence of	icer in Signature of officer  ←
ate (print)  igned for SUNWATER LIMITE 31 034 985 by an authorised of the presence of	icer in
Date (print)  Signed for SUNWATER LIMITE  31 034 985 by an authorised of	icer in Signature of officer  ←
Pate (print)  Signed for SUNWATER LIMITE  31 034 985 by an authorised of the presence of	icer in Signature of officer  ←

#### Schedule 1

1. Clause 2.1 of the Agreement and as amended by Deed of Variation and Extension No.1, Deed of Variation and Extension No.2 and Deed of Variation and Extension No.3

Delete "28 February 2011" and replace with "31 March 2011"

#### 2. Service Schedule

Delete first paragraph under heading "Flood Event Report" and replace with the following:

"During the drainage phase of a flood event, SunWater's duty engineers will assist Seqwater's duty engineers and hydrographers/modellers to prepare a Flood Event Report. The Report shall be completed and submitted to Seqwater, as soon as possible after the end of the flood event but no later than 6 weeks after the flood event and shall include:"

# Protocol for the Communication of Flooding Information for the Brisbane River Catchment - including Floodwater Releases from Wivenhoe and Somerset Dams

#### **OBJECTIVE**

The purpose of this protocol is to outline the arrangements for the Brisbane, Ipswich and Somerset Councils, relevant Queensland Government agencies and the Bureau of Meteorology, which will ensure the provision of consistent and robust information to the community, concerning potential flooding impacts for the Brisbane River catchment, including release of floodwater from Wivenhoe and Somerset Dams.

The intent is to ensure that consistent, harmonised information, based on an agreed single technical report, is communicated to the public in a way that contributes to resilient communities.

#### BACKGROUND

Queensland's disaster management arrangements, based on disaster management groups at local, district and state level, ensure the collaborative and effective coordination of information for all hazards.

Existing local, district and state disaster management and hazard-specific plans outline arrangements and structures for disaster management, or the hazard, and amongst other things, identify the need for coordination of public communications.

This protocol adds to such plans by outlining specific arrangements necessary when advice to the community needs to be based on technical assessments from hazard-specific primary agencies and other complementary stakeholders across federal, state and local governments.

Factors such as storm surges, tides, creek flooding, flooding from the lower Brisbane River, including Lockyer Creek and the Bremer River, will influence inundation levels in Brisbane.

Wivenhoe Dam controls approximately half of the Brisbane River catchment above Brisbane City. The operational strategy for water release from Wivenhoe and Somerset Dams is governed by the *Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam*, henceforth referred to as the Flood Mitigation Manual.

This protocol also covers the possibility that, during an above-average wet season, the water supply level of the dams may be marginally reduced, on a temporary basis, by small water releases. The water supply level would be returned to normal prior to the conclusion of the wet season, to avoid affecting water supply security. These changes, if they proceed, will ultimately be incorporated into the Flood Mitigation Manual.

#### GENERAL DECISION MAKING - GUIDING PRINCIPLES

 Protection of public safety is paramount throughout both this Protocol and the Flood Mitigation Manual;

- Impact on the community upstream or downstream is a legitimate consideration of any risk assessment;
- Regular and consistent communications within government and to the public, in relation to flooding impacts, are essential;
- Decision-making chains regarding the communications strategy and disaster management should remain flexible and highly responsive;
- The Flood Mitigation Manual is used to determine how Wivenhoe and Somerset Dams will be operated during flood events.
- This Protocol does not infringe the right of any party to issue information in line with their responsibilities.

#### PROCESS OF COMMUNICATION

There are three stages in the process of communication:

- Monitoring and Assessment
- Briefing and Activation
- · Public Communications

#### Monitoring and Assessment

Communications with the public on flooding information, including floodwater releases, are based on a continuous process of monitoring and technical assessment. The process is dynamic and evolves according to the event, but will normally contain the following steps:

- Routine monitoring of weather events and dam levels by relevant agencies via established systems and procedures;
- The Bureau of Meteorology (BoM) provides weather forecasts and warnings (e.g. Tropical Cyclone, Severe Weather, Severe Thunderstorm, Flood). In the event of heavy rain and runoff in the Wivenhoe and/or Somerset Dam catchments, BoM and the Queensland Bulk Water Supply Authority (Seqwater) discuss modelled inflows to Wivenhoe and/or Somerset Dam, and downstream flood levels.
- Councils monitor, to the extent that they are able, creek levels, local runoff and flash flooding, consult with BoM and Seqwater on other potential events upstream that may contribute to and aggravate the situation.
- Seqwater discusses and models implications of the inflows on the necessary floodwater release from Wivenhoe Dam and/or Somerset Dam. The floodwater release strategy is a balance between releasing the water quickly enough so that the flood storage capacity is available if another major rain event occurs, versus minimising downstream flooding impacts (human safety and property damage) from the releases.
- Seqwater calculates the floodwater releases according to dam levels and predicted weather events in accordance with the Flood Mitigation Manual. A fundamental principle is that all floodwater should be released from the dams within seven days of the flood event peaking in Wivenhoe or Somerset Dam. This ensures the dams can cope with closely spaced major rain events.
- Seqwater shares predicted floodwater releases with BoM and with the Councils.
- Councils with the ability to monitor flooding share information on the status of

the Brisbane River catchment and its river systems with each other, BoM, Seqwater.

- BoM undertakes modelling of the Brisbane River catchment and its river systems using Seqwater advice of actual and projected Wivenhoe Dam and/or Somerset Dam releases when these are occurring, or are expected to occur.
- BoM participates in technical discussions with Seqwater, Brisbane City Council, Ipswich City Council and Somerset Regional Council as necessary, to share modelling results. The discussions aim to establish a technical agreement on the flood situation, on which public communications should be based.
- Councils with the necessary resources and expertise undertake modelling, form
  predictions, identify flood inundation areas and assess impacts for their
  communities, and regularly share this information with all relevant parties.
  Councils without the necessary resources and expertise will rely on information
  from other agencies to complete the impact assessment for their communities.

During this continuous process, it may become apparent to either BoM, local governments or Seqwater that the situation is likely to result in public safety issues.

These public safety issues may arise from a decision to release floodwater, a significant change in the severity and scope of the event, or a pre-agreed trigger-point being reached.

Any of the agencies may initiate the public communications process and engage with the disaster management arrangements as appropriate.

The trigger points for commencing public communication of flooding information are defined according to an agency's responsibilities.

The initiating agency will instigate a technical staff teleconference. Decisions from the teleconference will be distributed to senior management and media representatives of each agency.

In these circumstances all agencies agree that technical advice will form the basis of public communications messages.

- In every case of floodwater release from Wivenhoe or Somerset Dam, Seqwater coordinates the completion of the Technical Situation Report - TSR (Appendix C) and provides the Report to the SEQ Water Grid Manager (according to their Emergency Response Plan), and to relevant local governments.
- In other circumstances where a formal technical statement would enhance clarity, the local or state agency initiating the public communication of flooding information will pull together relevant information from other agencies in the form of a TSR. If initiated, the TSR should be circulated to all parties.

#### **Briefing and Activation**

If public safety is considered to be at risk, consideration will be given to the activation of the disaster management arrangements, if not already activated.

- Councils will consider activating their Local Disaster Management Groups (LDMGs);
- 2. LDMGs will inform the relevant District Disaster Coordinators (DDCs);

- The Queensland Police Service (QPS) will consider initiating disaster management actions as provided for under the Disaster Management Act 2003;
- 4. In the case of floodwater release:
  - (a) the SEQ Water Grid Manager will alert the Director-General (DG) of the Department of Community Safety (DCS), DG Department of Environment and Resource Management (DERM), and the local governments
  - (b) DG DCS will inform the DG of the Department of Premier and Cabinet (DPC) - the Chair of the State Disaster Management Group (SDMG) and will activate the State Disaster Coordination Centre (SDCC). DG DCS will also inform the Minister for Police, Corrective Services and Emergency Services
  - (c) DG DERM will inform the Minister for Natural Resources, Mines and Energy
  - (d) DG DPC will inform the Premier;
- In the case of an extreme event, the Crisis Communications Network, chaired by DPC, may be activated at the direction of the SDMG Chair to coordinate public messaging from BoM, Seqwater, SEQ Water Grid Manager, QPS, relevant Councils and DCS as per this protocol;
- 6. In the case of a non-disaster, public communications will be in accordance with existing arrangements, supported, where appropriate, by this protocol.

#### **Public Communications Issues**

Each agency has its own responsibilities to issue information commensurate with their role without prior approvals. The obligation under this protocol is to share that information with other agencies and operate in a fully consultative process to ensure consistent public information.

The BoM, Local Governments and relevant State Government agencies agree to maintain continual discussions, to ensure that conflicting information is not released to the public at any time. Genuine efforts should be made to ensure consistency by basing public communications on technical reports. Inter-agency consultation should not cause delays in the issuance of public warnings. All agencies agree to exchange public communications at time of release. No power of veto to any organisation is implied under this protocol.

Harmonised public communications messages will be released from the following agencies:

- Bureau of Meteorology concentrating on Flood Warnings which are widely
  disseminated to the BoM website, agencies and the media. BoM also participates
  in media (radio, television, newspaper) interviews to provide factual information
  regarding observed and forecast weather conditions, rainfalls and water levels;
- Local Governments / Local Disaster Management Groups concentrating
  on the effects of weather related events and safety for their local communities
  and residents, and the impacts on councils' assets. Local governments have
  primacy of public communications within their community. Community service

announcements from local governments will be shared with the relevant agencies, prior to public release if time allows;

 SEQ Water Grid Manager - if floodwater releases from Wivenhoe and Somerset dams are involved, the SEQ Water Grid Manager concentrates on the communication aspects of release timings and duration of effects as the State's lead communication agency on floodwater release. Seqwater operational staff are to ensure that technical information is communicated to the SEQ Water Grid Emergency Response Team (if activated), the SEQ Water Grid Communications Unit and relevant local governments.

If necessary these will be augmented by:

- Queensland Police Service concentrating on specific community safety messaging during operations;
- Department of Community Safety concentrating on general safety matters regarding flooding;
- Department of Premier and Cabinet (extreme events only) concentrating on consistent messages to media and agencies concerned.

Event-specific information will be released to the public as frequently as required by the severity and scope of the event. Timings of media releases will be dependent on the event, guided by the frequency of technical reports and may range from once a day to once an hour.

In the case of floodwater release from Wivenhoe and/or Somerset Dam, SEQ Water Grid Communications Unit will centrally track all communications and ensure they are shared. The unit will liaise with the following or their representatives over pubic safety messages:

- BoM;
- Seqwater;
- · Councils' Media Directors;
- QPS Media Director; and
- DCS Media Director.

#### **Questions from the Public**

All questions from the public should be directed to the relevant local government in the first instance. Questions expressly relating to the event should be directed to the hazard-specific primary agency. Any questions relating to the release of floodwater should be directed to the SEQ Water Grid Communications Unit. Any queries about disaster management should be addressed by the relevant local and district disaster management groups.

#### **Protocol Maintenance**

This protocol will be reviewed annually by agencies involved and exercised, during non-operational season, under DDMG arrangements.

The protocol should provide for a review after each event of what worked and could be improved for management of future events, to be led by DCS.

WGM TRIM: D/10/7645

# Communications process for the release of floodwater from Wivenhoe and Somerset Dams Routine monitoring by relevant agencies via established systems and procedures BoM provides weather and flood forecasts and warnings Local governments monitor creeks, local runoff, flash flooding Monitoring Seqwater models implications of inflows and calculates floodwater release and Assessment BoM undertakes modeling of river systems and catchments BoM, local governments, Seqwater - technical discussions Local governments assess impact for their communities Apparent public safety issue No Yes Agency initiates process TSR completed Agreed public safety issue Consideration Briefing Councils alert LDMGs and LDMGs inform DDCs Activations QPS consider DM actions under DM Act 2003 In case of flood water release SEQW Grid Manager alerts DGs DG DCS alerts DG DPC - Chair of SDMG SDMG alerts DDMGs DG DERM alerts Min NRM&E Extreme Event State Public Info arrangements activated Harmonised information BoM - on event SEQW Grid CU - on release Public Councils - on effects DCS/QPS - on safety communications

(Extreme event) (State - strategic issues)

#### **ROLES AND RESPONSIBILITIES**

 The Bureau of Meteorology (BoM) is the agency responsible for issuing flood warnings for the Brisbane River and its major tributaries. These, when required, include rainfall forecasts for the Brisbane catchment and predicted river heights for Brisbane City, Ipswich, Jindalee and Moggill according to established procedures.

River height predictions are agreed in consultation with Seqwater, Brisbane City Council (BCC), Ipswich City Council (ICC) and Somerset Regional Council (SRC), as required.

Queensland Bulk Water Supply Authority (Seqwater) operates Wivenhoe and Somerset
Dams in accordance with the Flood Mitigation Manual. It provides dam outflow
information to BoM, to allow the development of Flood Warnings and to local
authorities, to assist them in quantifying likely impacts within their areas.

It informs BoM and other agencies on the status of dams, and actual and projected releases from Wivenhoe and Somerset dams. It consults BoM regarding inflows to Wivenhoe and Somerset dams and expected flood heights along the Brisbane River downstream of Wivenhoe Dam.

Seqwater initiates proposed reviews or updates to the Flood Mitigation Manual, undertaking consultation with Councils and other stakeholders. Seqwater coordinates the production of the TSRs relating to floodwater releases from the Wivenhoe and Somerset dams.

- Brisbane City Council (BCC), Ipswich City Council (ICC) and Somerset Regional Council (SRC) distribute consistent, detailed local flood level information, both to their respective operational units, their senior management and their broader communities. This should include the interpretation of BoM flood warnings and river height forecasts into expected areas and depths of inundation. Councils are responsible for activating their respective Local Disaster Management Groups (LDMGs), which then undertake the disaster management responsibility for response in the community.
- Department of Environment and Resource Management (DERM) consults with the stakeholders prior to the approval of any updates to the Flood Mitigation Manual.
   DERM also approves any necessary variations to the strategies in the manual if required during the course of a flood event.
- Queensland Police Service (QPS) assumes a legislative role, as per the disaster management system, to provide disaster management at a district level during an event, including provision of necessary community advice for public safety.
- <u>Emergency Management Queensland (EMQ)</u> provides support and general community safety advice on flooding issues, during non-operational times.
- <u>SEQ Water Grid Manager</u> in the case of floodwater release alerts the Director-General (DG) of the Department of Community Safety (DCS), DG Department of Environment and Resource Management (DERM), and the local governments.
- <u>SEQ Water Grid Communications Unit</u> tracks the general harmonisation, but not specific detail of public messaging relating to floodwater releases, with BoM, SEQ Water Grid, Councils and DCS, as required. It does this by ensuring that each agency understands the extent of the release and that there is a general consensus as to the level of potential impacts.

#### Appendix C

#### **TECHNICAL SITUATION REPORT**

TSR Number	Date of TSR	Time of TSR
	release	release

This report is as at the time of assessment, and may quickly become out of date, depending on the current events. It relies on timely information provided by Seqwater, BoM and Councils. A reply will be required by a specified time and if not received by that time no information will be included. If any information is not provided, the section will remain blank. There will be no follow up requests.

Each authority will provide an email and telephone contact for all communications. If an event escalates, there may be less time to respond or it may not be possible to respond to requests.

In floodwater releases Seqwater will email advices on releases to the organisations email address provided. Once a flood event is initiated, at any time a Council or agency can contact Seqwater to discuss if they have a serious concern regarding the information on releases provided. This would normally be by phone and followed by email. However, the ability to respond to any queries depends on the event. The frequency of advices will depend on the severity of the event and the needs of each agency.

Sequater will also request at that time, a situation assessment from each agency as per details outlined in this document. Each agency will then email in return the requested information if possible or advice that it has not changed. If it is not received within the specified timeframe, it is assumed it is not being provided.

# Seqwater status of inflows and dam operations

(to include information on the current and/or predicted levels of Somerset and Wivenhoe Dams and the probable or planned release strategy with assessment as governed under the Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam )

This is Seqwater's status report on the dam levels, probable inflows and planned releases.
***************************************
This has been supplied to
BCC on
ICC on SRC on
SRC OII
Issues raised by Councils were
Actions taken were
Seqwater Technical Officer name
Seqwater Technical Officer position title
Segwater Technical Officer contact details
BoM assessment
(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau
forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)
BoM is to provide either a copy of, or links to, their current information and other updates or
comments if needed. This will be their current set of warnings and may be updated or changed at any
time.
BoM Technical Officer name
BoM Technical Officer position title
BoM Technical Officer contact details

This is an assessment as provided by BCC. A request for this information will be sent to the email address provided by BCC.		
BCC Technical Officer name		
BCC Technical Officer position title		
BCC Technical Officer contact details		
Ipswich City Council (ICC) assessment (if required) (to include predicted local inundation areas and depths of inundation based on the information)		
This is an assessment as provided by ICC. A request for this information will be sent to the email address provided by ICC.		
ICC Technical Officer name		
ICC Technical Officer position title		
ICC Technical Officer contact details		
Somerset Regional Council (SRC) assessment (if required) (to include predicted local inundation areas and depths of inundation based on the information)		
This is an assessment as provided by SRC. A request for this information will be sent to the email address provided by SRC.		
This is an assessment as provided by SRC. A request for this information will be sent to the email		
This is an assessment as provided by SRC. A request for this information will be sent to the email address provided by SRC.  SRC Technical Officer name  SRC Technical Officer position title		
This is an assessment as provided by SRC. A request for this information will be sent to the email address provided by SRC.  SRC Technical Officer name		
This is an assessment as provided by SRC. A request for this information will be sent to the email address provided by SRC.  SRC Technical Officer name  SRC Technical Officer position title		
This is an assessment as provided by SRC. A request for this information will be sent to the email address provided by SRC.  SRC Technical Officer name  SRC Technical Officer position title  SRC Technical Officer contact details		

Brisbane City Council (BCC) assessment (to include predicted local inundation areas and depths of inundation based on the information)

# DS 5.3 Processing a flood mitigation manual for a dam following review

WIR/2011/4884 - Version 1

Endorsed 16/09/2011 by Robert Reilly, General Manager, Office of the Water Supply Regulator





# **Table of Contents**

Version History	1
Purpose	2
Rationale	3
Procedure	4
Step 1 - Receiving a reviewed flood mitigation manual	4
Step 2 - Assessment officer conducts an assessment of the reviewed flood mitigation manual	4
Step 3 - Request further information	5
Step 4 - Decision maker makes decision about reviewed flood mitigation manual	6
Step 5 - Assessment officer prepares non-approval letter for the reviewed flood mitigation manual	6
Step 6 - Assessment officer prepares gazette notice	6
Step 7 - Letter sent to dam owner advising of approval of reviewed manual	7
Step 8 - Assessment officer takes appropriate action with respect to RDR, the file and departmenta records	
Responsibilities	8
Definitions	9
References	.10
Legislation	. 11
Attachments	. 12



# **Version History**

Version	Date	Comment
1	16/09/2011	Original approval



# **Purpose**

To provide a framework for processing a reviewed flood mitigation manual for a dam submitted by the dam owner under section 373, Part 2, Chapter 4 of the *Water Supply (Safety and Reliability) Act 2008* (the Act).



## Rationale

All dams provide some flood mitigation benefits. However, certain dams are explicitly required to be managed so as to optimise these benefits. These dams are able to provide flood mitigation benefit through the temporary storage and later release of flood flows. As the release of such floodwaters can cause damage to property and/or the environment or potentially put lives at risk, it is essential that the dam be operated in accordance with clearly defined procedures to minimise hazard and damage to life and property while protecting the safety of the dam. A flood mitigation manual ensures that such dams make controlled releases of water for flood mitigation purposes in accordance with pre-agreed conditions. The regulatory framework within which these dams are managed for flood mitigation purposes is contained in sections 370 to 374 of the *Water Supply (Safety and Reliability) Act 2008* (the Act).

#### Regulatory context

Section 373 of the Act requires the owner of a dam to review the flood mitigation manual for a dam before the approval for the manual expires. The dam owner must provide the chief executive with a copy of the reviewed flood mitigation manual, for approval under s. 371 of the Act.

The chief executive may also get advice from an advisory council before approving the manual.

## **Application**

This work practice applies to a dam owner who has an existing flood mitigation manual which has been reviewed and/or updated and submitted to the chief executive for approval. The process for approval of the first flood mitigation manual for a dam is a separate work practice. Please refer to the work practice DS 5.1 Flood Mitigation Manual for a Dam.

The dam owner, can at any time, submit an amended or reviewed flood mitigation manual for approval. For continuity the reviewed and/or updated manual must be approved before the expiry of the previous manual.



## **Procedure**

This work practice is set out below.

A flow chart for this work practice can be found in Attachment A <attachments/a-ds5-3-fmm-flowchart.pdf> .

# Step 1 - Receiving a reviewed flood mitigation manual

Upon receiving the reviewed flood mitigation manual being submitted for approval, the project officer:

- Stamps the covering letter (or a copy of the front page and contents page of the manual if there was no covering letter) with the Document Received by DERM stamp
- Scans the document (or copy created above) and records details in Keeper on the file for the dam and fills in the relevant sections of the document received stamp in accordance with local office processes and departmental standards
- Updates WICD–RDR
- Prepares an acknowledgement letter to the dam owner that the reviewed flood mitigation manual has been received and is being assessed. Refer to Attachment B <attachments/b-ds5-3-fmm-ack-let.pdf> for a template for an acknowledgement letter (A template for this letter is available in G:\WIR\Dam\_Safetv\Templates).
- Gives all documents and the file (if required) to the decision maker.

The Director, Dam Safety (Water Supply):

- Checks and signs the letter confirming receipt of the manual. If changes are necessary to the draft letter
  confirming receipt of the reviewed manual, the Director, Dam Safety (Water Supply) should make the
  changes and return the letter to the project officer for updating prior to signing.
- Allocates an assessment officer to assess the amended manual.
- Gives the signed letter, the manual and the file to the project officer.

#### The project officer:

- · Copies and sends the signed letter.
- Scans the signed letter and registers the letter in Keeper in accordance with local office processes and relevant departmental standards.
- Places the copy of the signed letter on the file relating to the flood mitigation manual for the dam.
- Updates WICD–RDR with appropriate information.
- Gives the manual and file to the assessment officer.

Proceed to Step 2

# Step 2 - Assessment officer conducts an assessment of the reviewed flood mitigation manual

The assessment officer:

• Conducts a detailed assessment of the reviewed flood mitigation manual. Assessment officers are expected to conduct the detailed assessment having regard to the matters outlined in the guidelines and work procedures issued under the Act's provisions and other Queensland Government policy statements as advised by the chief executive of DERM (see references section of this work practice). The assessment must also include the Reviewed Flood Mitigation Manual (FMM) Assessment and Decision Form and the notes in that form (see Attachment C <attachments/c-ds5-3-fmm-a-d-form.pdf> . A template for this form is available in G:\WIR\Dam\_Safety\Templates).



- Requests, if appropriate, legal review of the reviewed FMM from the Legal Services section of the department (in accordance with departmental processes).
- Completes the Reviewed FMM Assessment and Decision Form as the assessment occurs.

The purpose of the flood mitigation manual checklist (checklist) which forms part of the Reviewed FMM Assessment and Decision Form is to assist the assessment officer to determine whether the flood mitigation manual complies with the Act and the guidelines and to enable the assessment officer to make a recommendation on whether the reviewed flood mitigation manual should be approved. However, assessment officers should note that the checklist is not intended to be relied upon by assessment officers as an exact statement of the Act and the guidelines and it is essential that assessment officers regularly refer to the full text of those documents to determine the precise details of these requirements.

Discussions with dam owners and other stakeholders may be undertaken to refine the content of the manual and to ensure that the reviewed flood mitigation manual is adequate for its required purpose. See Step 3.

In completing the Reviewed FMM Assessment and Decision Form the assessment officer:

- Records on the Reviewed FMM Assessment and Decision Form whether the manual complies with the Act and the guidelines.
- Includes appropriate comments in the Reviewed FMM Assessment and Decision Form about individual items (in the comments column for the appropriate item/s). Note: if the assessment officer believes additional information or clarification of information is required proceed to Step 3 prior to completing this step.
- Completes the 'assessment officer's recommendation to decision maker' part of the Reviewed FMM Assessment and Decision Form, including all items that are relevant to the recommendation/s made.
- Gives the Reviewed FMM Assessment and Decision Form, the manual and the file to the decision maker.

Assessment officers should be aware that the information and documents referred to in the Reviewed FMM Assessment and Decision Form and kept and retained in Keeper and on departmental file/s may later need to be made available to the decision maker, or other people, for independent consideration or inspection.

Proceed to Step 4.

# Step 3 - Request further information

In some situations the assessment officer may need to communicate with the owner of the dam, or other people, to clarify certain issues for the assessment of the reviewed flood mitigation manual (this may include editorial amendments and minor corrections to the FMM). Accurate and written records of any communications, including verbal communications, must be kept and retained in Keeper and on the relevant departmental file. These records should indicate who was contacted or consulted about particular issues, when this occurred and the advice that was given. It may also be appropriate for the assessment officer to make some reference to these communications in the Reviewed FMM Assessment and Decision Form itself (for example, in the comments column for the appropriate item/s in the checklist).

Assessment officers should be aware that the information and documents referred to in the Reviewed FMM Assessment and Decision Form and kept on departmental file/s may later need to be made available to the decision maker, or other people, for independent consideration or inspection.

A suggested format for a letter requiring further information can be found at Attachment D <attachments/d-ds5-3-fmm-req-info.pdf> . A template for this letter is available in G:\WIR\Dam\_Safety\Templates.

The letter requiring further information must:



- Be prepared on the basis of the information contained in the Reviewed FMM Assessment and Decision Form (see Step 2) and
- Be sent to the owner of the dam.

Return to Step 2 when requested information is received.

# Step 4 - Decision maker makes decision about reviewed flood mitigation manual

The decision maker:

- Considers the reviewed flood mitigation manual and the recommendation made by the assessment officer.
- Decides what action should be taken in relation to the reviewed manual. The decision maker is
  expected to assess the appropriate action to take having regard to the matters outlined in the Reviewed
  FMM Assessment and Decision Form and the notes to that form ( Attachment C
  <attachments/c-ds5-3-fmm-a-d-form.pdf> ).
- Completes the 'decision maker's decision' part of the Reviewed FMM Assessment and Decision Form.
- Gives the completed Reviewed FMM Assessment and Decision Form, the manual and the file to the assessment officer.

Depending on the situation, available options for the decision maker may be to:

- Seek further advice (this could be legal advice or advice from an advisory council)
- Not approve the manual because it does not meet the expected requirements for approval. Go to Step
- Approve the manual Go to Step 6.
- Require more information from the dam owner Go to Step 3.
- Require a more detailed assessment of the FMM by the assessment officer Go to Step 2.

If the decision maker decides more information is required from the dam owner, they should indicate this on the Reviewed FMM Assessment and Decision Form and return all documentation to the assessment officer who will return to Step 3.

# Step 5 - Assessment officer prepares non-approval letter for the reviewed flood mitigation manual

Assessment officer receives the decision to not approve the reviewed manual from the decision maker and prepares a draft letter (including yellow file copy) advising that the reviewed flood mitigation manual doesn't meet the requirements of the Act and relevant guidelines. See Attachment E <attachments/e-ds5-3-fmm-non-app-let.pdf> for a template. A template for this letter is available in G:\WIR\Dam\_Safety\Templates.

Assessment officer gives the draft letter to the decision maker who either signs the letter or requests changes to be made.

Once the decision maker has signed the letter the assessment officer sends the letter to the dam owner.

If a new flood mitigation manual is received from the dam owner in response to the letter return to Step 1.

Go to Step 7.

# Step 6 - Assessment officer prepares gazette notice



Assessment officer receives the decision to approve the reviewed manual from the decision maker and prepares a draft gazette notice and completes a request to publish in the Queensland government gazette form.

- The gazette notice should state the following:
- The notice number and year
- The date and approval details for the reviewed manual
- The dates for which the reviewed manual is approved. This may be for the remainder of the approval
  period for the existing approved manual or for not more than five years from the date of approval of the
  reviewed manual.

Note: see Attachment F <attachments/f-ds5-3-fmm-gaz-notice.pdf> for a draft template of the gazette notice. A template for this document is available in G:\WIR\Dam\_Safety\Templates. The request to publish in the Queensland Government Gazette form is available from Executive Council Team (ECT), Cabinet and Parliamentary Services or on insite.

Once the notice has been prepared and the form completed they must be signed off by the Director, Dam Safety (Water Supply) (or a higher position) and sent to ECT. The electronic version of the gazette notice must also be sent by email. The ECT will arrange for publication of the notice in the gazette and will advise the assessment officer by email of the publishing of the notice. Go to Step 7 when gazettal has taken place.

# Step 7 - Letter sent to dam owner advising of approval of reviewed manual

The assessment officer prepares draft letter (including yellow file copy) to dam owner advising of approval of the reviewed manual and enclosing a copy of the gazette notice. See Attachment G <a href="https://doi.org/10.21/2016/by-10.21/201

Assessment officer gives the draft letter and copy of the gazette notice to the decision maker for signing.

Once the letter has been signed by the decision maker the project officer sends the letter and gazette notice to the dam owner.

Go to Step 8.

# Step 8 - Assessment officer takes appropriate action with respect to RDR, the file and departmental records

The assessment officer:

- conducts a final check to ensure all relevant data has been entered into WICD-RDR.
- checks the completed Reviewed FMM Assessment and Decision Form has been signed by the
  assessment officer and decision maker, and that this form and all other documents created or received
  during the course of this work practice have been placed on the appropriate departmental file/s.
- returns the departmental file to the project officer who will check that all relevant documents have been registered in Keeper. If not, the project officer will register the documents in Keeper in accordance with local office processes and relevant departmental standards.

The processing of a flood mitigation manual for a dam following review is complete.



# Responsibilities

Dam owner – under section 373 of the Act, the dam owner must, before an approval for the flood mitigation manual for a dam expires, review, and if necessary, update the flood mitigation manual and give a copy of the reviewed manual, for the dam to the chief executive for approval under s. 371.

Chief executive – section 371(2) of the Act gives the chief executive the power to approve the reviewed flood mitigation manual for a dam.

Under the Water Supply (Chief Executive) Delegation the above powers of the chief executive have been delegated to the following positions:

- 1. Director, Dam Safety (Water Supply), Dam Safety, Office of the Water Supply Regulator
- 2. Project Director, Dam Safety, Office of the Water Supply Regulator (position number 76025966)
- 3. Director, Water Industry Asset Management and Standards, Office of the Water Supply Regulator
- 4. General Manager, Office of the Water Supply Regulator.

Decision makers – if the decision maker is not the Director-General, DERM he/she must ensure that he/she has, at the time of making his/her decision, a current delegation allowing him/her to make his/her decision. This is important as instruments of delegation can be revoked and replaced from time to time.

Assessment officer – is required to carry out the assessment of a reviewed flood mitigation manual, submitted to the Department under s. 373 for approval under s. 371 of the Act, having regard to the matters outlined in the Reviewed FMM Assessment and Decision Form ( Attachment C <attachments/c-ds5-3-fmm-a-d-form.pdf>) and the notes to that form. The assessment officer is expected to complete the form, as the assessment occurs, and must take into account the requirements of the guidelines, departmental policy documents and this work practice.

Project officer – performs any administrative duties as required under this work practice or by the assessment officer or decision maker or Director Dam Safety (Water Supply).



## **Definitions**

"the Act" - means the Water Supply (Safety and Reliability) Act 2008

"assessment officer" - refer to the responsibilities section of this work practice.

"chief executive" - means the Director-General, Department of Environment and Resource Management

"dam" -

- Dam means—
  - Works that include a barrier, whether permanent or temporary, that does or could impound water;
     and
  - The storage area created by the works.
- 2. The term includes an embankment or other structure that controls the flow of water and is incidental to works mentioned in paragraph (1) above.
- 3. The term does not include the following:
  - A rainwater tank:
  - A water tank constructed of steel or concrete or a combination of steel and concrete;
  - A water tank constructed of fibreglass, plastic or similar material.

"decision maker" – means the person making the decision to approve a reviewed flood mitigation manual for a dam, under this work practice. This may be the Director-General, DERM or a person who has been delegated the power to approve a flood mitigation manual.

"DERM" - Department of Environment and Resource Management.

"Director, Dam Safety (Water Supply)" – for the purposes of this work practice – means Director, Dam Safety (Water Supply) or the Project Director, Dam Safety (Position No. 76025966).

"flood mitigation manual" or "FMM" – means a manual prepared under s. 370, or reviewed and updated under s. 373.

"guidelines" - means Guidelines for Failure Impact Assessment of Dams; Queensland Dam Safety Management Guidelines; Guidelines on Acceptable Flood Capacity for Dams; Emergency Management Planning for Floods Affected by Dams (2009) - Australian Government (Manual 23 of Australian Emergency Manual Series); Work practice DS 5.3 Processing a flood mitigation manual for a dam following review (WIR/2011/4884 in the Policy Register) and other Queensland Government policy statements as advised by the chief executive.

"insite" - means the internal website for use by officers of the department.

"project officer" – refer to the responsibilities section of this work practice.

**"RDR"** – means the Referable Dam Register of the Water Industry Compliance Database – the module within WICD that records administrative information about referable dams.

**"WICD"** – means Water Industry Compliance Database – a database that records information relating to service providers and dams.



## References

The following documents should be referenced in conjunction with this work practice:-

- Water Supply (Safety and Reliability) Act 2008
- Water Supply (Chief Executive) Delegation (No. 1) 2011
- Work Practice DS 5.1 Flood mitigation manual for a dam (WIR/2009/3991 in policy register).
- Queensland Dam Safety Management Guidelines
- Guidelines for Acceptable Flood Capacity for Dams
- Guidelines for Failure Impact Assessment of Water Dams
- Emergency Management Planning for Floods Affected by Dams (2009) Australian Government (Manual 23 of Australian Emergency Manual Series).

Officers involved in this work practice should also be familiar with, and comply with, requirements of the following departmental standards:

- Departmental policy RKP/2006/2907 Recordkeeping overarching policy
- Departmental policy RKP/2006/2899 Recordkeeping email policy
- Departmental standard IMP/2005/2253 Procedures for using electronic mail
- Departmental standard ADM/2005/941 Paper-based document management
- Departmental standard ADM/2002/965 Decision making and requests for statements of reasons under the Judicial Review Act 1991
- Departmental standard ADM/2003/1402 Information privacy.



# Legislation

Water Supply (Safety and Reliability) Act 2008



## **Attachments**

Attachment A - Flowchart <attachments/a-ds5-3-fmm-flowchart.pdf>

Attachment B - Acknowledgement letter <attachments/b-ds5-3-fmm-ack-let.pdf>

Attachment C - Assessment and decision form <attachments/c-ds5-3-fmm-a-d-form.pdf>

Attachment D - Request for information letter <attachments/d-ds5-3-fmm-req-info.pdf>

Attachment E – Non-approval amended flood mitigation manual letter <attachments/e-ds5-3-fmm-non-app-let.pdf>

Attachment F - Gazette notice <attachments/f-ds5-3-fmm-gaz-notice.pdf>

Attachment G - Approval of amended flood mitigation manual letter <attachments/g-ds5-3-fmm-app-let.pdf>

8 February 2012

Justice Catherine E Holmes Commissioner of Inquiry Queensland Floods Commission of Inquiry Level 30 400 George Street Brisbane QLD 4000

By Hand

ABN 47 702 595 758 Level 31 Riverside Centre 123 Eagle Street Brisbane QLD 4000 Australia

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**Dear Justice Holmes** 

#### Segwater

# Requirement to Provide Information to Peter Borrows dated 7 February 2012

We refer to the Commission's requirement to provide information dated 7 February 2012 issued to Peter Borrows (*Requirement*) which required the provision of documents evidencing:

- 1. the systems and procedures relevant to:
  - (a) the provision of information to the chief executive officer and the board about the management of Wivenhoe and Somerset dams during the flood events that occurred in the 2010/2011 wet season;
  - (b) the review of the flood mitigation manual for Wivenhoe and Somerset dams and its submission to the Department of Environment and Resource Management for approval under the *Water Supply (Safety and Reliability) Act 2008* (Qld), which resulted in Revision 7 of the Manual;
  - (c) the creation of the flood event reports following flood events at Wivenhoe and Somerset dams that occurred in 2010/2011 wet season;
- how those systems and procedures were developed, including:
  - (a) external advice obtained;
  - (b) who approved them before implementation;

Beijing Beijing IP
Brisbane
Hanoi
Ho Chi Minh City
Hong Kong
Jakarta
Melbourne
Perth
Phnom Penh
Port Moresby
Shanghai
Singapore

Sydney

Bangkok

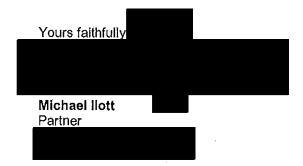
Our Ref MGI:120128021

- (c) what role, if any, the chief executive officer and the board played in that development;
- 3. how those systems are tested and reviewed, including:
  - (a) how often testing is completed;
  - (b) who completes the tests;
  - (c) any external or internal review or audit of those systems or procedures or tests of them;
- 4. any breaches of those systems and procedures identified by Segwater;
- 5. any weaknesses identified in those systems and procedures, and any action taken by Segwater to address those weaknesses;
- 6. a list of risk management frameworks adopted by Seqwater (for example, an Australian Standard) relevant to topics 1(a) to 1(c).

We refer to our correspondence enclosing documents relevant to the Requirement delivered at about midday today.

Continuing searches by our client have identified further documents relevant to the Requirement.

We **enclose** a USB stick containing those further documents, identified in the time available. Any additional documents identified will be forwarded to the Commission by way of supplement.



Encl.



# **User Manual**

Rev. 1.0.5

April 1, 2011







## 1. Introduction

## System Requirements

Windows 98 / ME / 2000 / XP / Vista / 7 USB 2.0 Host

## Multilingual Support

English, Simplified Chinese, Traditional Chinese

## ■ Disk Partitioning

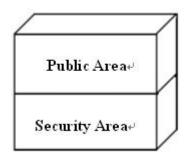
UFD Utility can be used to partition a flash drive into two separate partitions. By default, the flash drive has only one partition. This partition is known as Public Area.

Public Area

Default setting where there are no security restrictions. Users can use the entire memory area as Public Area.

Security Area

All data in the Security Area is protected by a password.

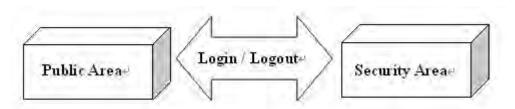






#### Public Area + Security Area

All data stored in the Security Area is protected by a password. However, the Public Area has no restrictions in access.



Public Area + Security Area

#### ■ Note

Please be aware that some utility functions will format the flash drive after executing the uDiskToolBar.exe. Please backup all flash drive data before executing the program.





# 2. Icon Descriptions



## (A) Partition Manager

■ Partition flash drive into "public area" only or "public area + secure area". It allows user to modify the disk volume label and password for security area.

#### (B) Security Area Manager

■ Enables user to enter password and login to the secure area. It also allows user to logout of the secure area.

## (C) Auto Run Manager

Create a virtual CD-ROM partition with the Autorun feature. This tool also supports ISO image file making.

## (D) Boot Disk Manager

■ Formats the flash drive as a bootable disk.

## (E) PC Lock Manager (Windows XP only)

Lock PC to prevent unauthorized use for set time after flash drive is unplugged.



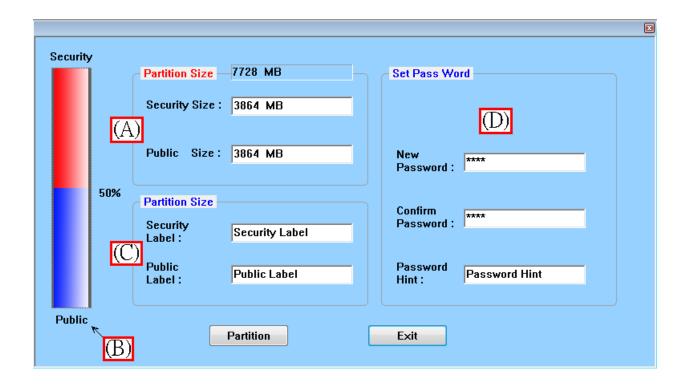


# 3. UFD Utility Operation

Click "Partition Manager" on the UFD Utility bar.



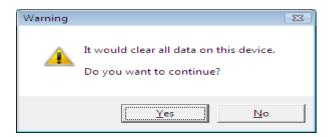
"Partition Manager" window will pop up.



- (A) Input Public and Security area size.
- **(B)** Use keyboard  $(\uparrow,\downarrow,\leftarrow,\rightarrow)$  or mouse to adjust Public or Security area size.
- (C) Input Security Disk Label and Public Disk Label.
- (D) Input new password, confirm password and password hint.
- Click "Partition" button to execute.
- A warning message prompts user to backup all the data before partitioning the drive.







■ After clicking "Yes" the following message will appear.





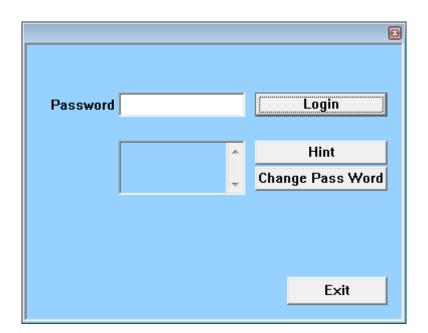


# 4. Security Area Manager

■ Click "Security Area Manager" on the UFD Utility bar.



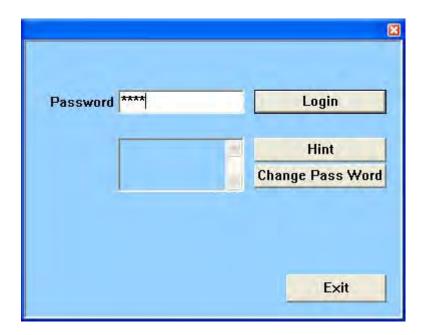
■ Following window will appear



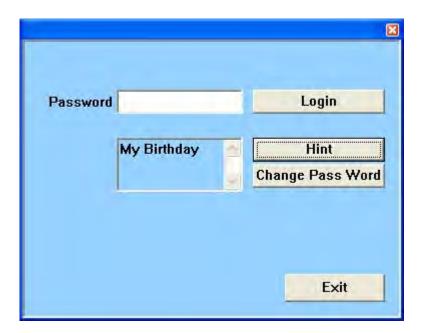




■ Enter password to login to secure area.



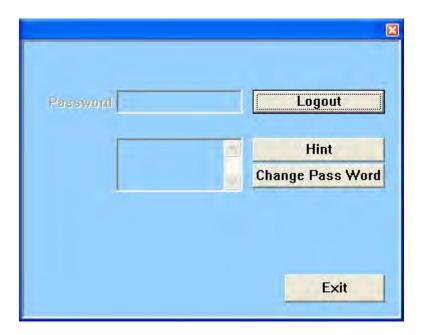
■ Click "Hint" to recall the password reminder.







■ Click "Logout" to logout of the secure area.

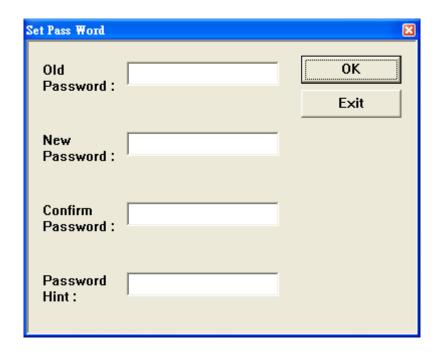


■ It will display "logout success" and then exit the secure area and user will have access to the public area.





■ Click "Change Password" to modify the password.



■ The following warning message will appear.





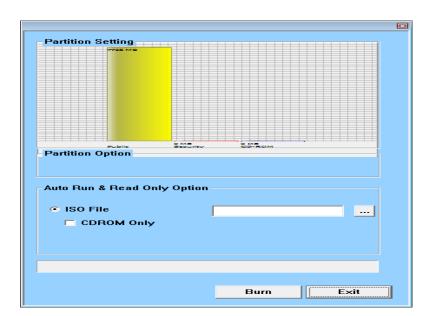


# 5. Auto Run Manager

To use an existing ISO file to create a virtual CD-ROM for Autorun, click "Auto Run Manager" on the UFD Utility bar.



"Auto Run Manager" window will pop up.



- Select the path to where the "ISO file" is stored.
- Check "CD-ROM Only" to create virtual CD-ROM
- If you want to change virtual CD-ROM to normal USB disk, do not check "CD ROM Only".
- Click "Burn".



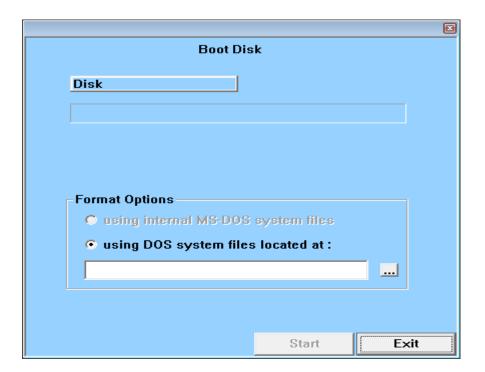


# 6. Boot Disk Manager

■ Click "Boot Disk Manager" on the UFD Utility bar.



■ Enter the path where the DOS system files are located. Click "Start" to create a DOS Boot Disk.



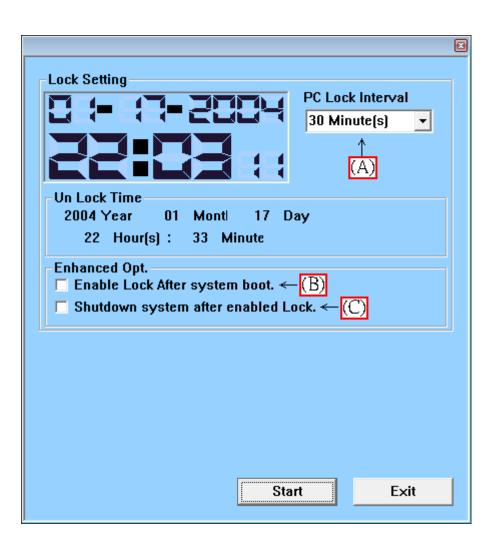




# 7. PC Lock Manager

■ Click "PC Lock Manager" on the UFD Utility bar.









- (A) PC Lock Interval: Select lock time from "PC Lock Interval" drop down box. When the flash drive is unplugged, the keyboard and mouse will be locked for the time period selected.
- **(B)** Enable Lock after system boot: After a system reboot, the keyboard and mouse will be locked. The keyboard and mouse will return to normal use after the flash drive is plugged in.
- **(C)** Shutdown system after enabled Lock: After the keyboard and mouse are locked, the PC will shut down automatically.



Item No: 12

Meeting Date: 10 December 2010

Prepared By: Jeff Lyddon, Principal Risk Advisor

Presented By: Helen Moore, Executive General Manager – Business Services

Attachments: Executive Summary – Desktop Capability Evaluation

#### RECOMMENDATION

That the Audit Committee notes the Risk Management Framework Desktop Capability Evaluation report as prepared by Deloitte.

#### BACKGROUND

During September 2009, KPMG undertook an "As Is" review of Seqwater's risk management framework. The four areas identified as key concerns were:

- 1. No agreed framework had been set for implementation.
- 2. No set of risk management guidelines.
- 3. A lack of defined roles and responsibilities.
- 4. No formalised reporting structure.

On this basis, a program of work commenced to establish a risk management framework for Seqwater within the context of the supply chain.

This work has subsequently led to the establishment of:

- A risk governance structure also incorporating the Board and the Audit Committee.
- A strategic Enterprise Risk Register which is reported to the Board quarterly.
- The operational Priority Risks which are reported to the Board monthly.
- · Operational risk registers which determine the risk priorities.
- A Risk Management Framework which contributes to the strategic and operational planning process.
- A Risk Assessment Team which consists of representatives from across the business.
- Defined roles and responsibilities relating to risk for Executive Leadership Team (ELT), Principal Risk Advisor, the Risk Assessment Team and general employees.
- A process to escalate identified grid-wide extreme and high risks to the SEQ Water Grid Manager for assessment by the Risk Officers' Committee (ROC).
- · Consolidated risk assessment tools across Segwater.

#### **DESKTOP CAPABILITY EVALUATION (FINDINGS)**

To ensure that Seqwater was demonstrating good risk management practice, Deloitte was engaged in October 2010 to conduct a desktop evaluation of progress since the 2009 KPMG review.

Deloitte was asked to assess capability maturity and suggest any improvements. It should be noted that this assessment was conducted at a high level and should not be considered to be an audit.

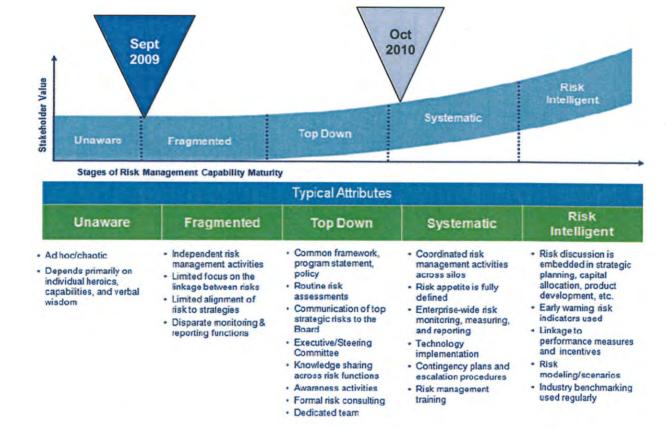
It should also be noted that a comparison was made between the KPMG Review in 2009 and the findings from Deloitte to ensure that consistency was maintained throughout this assessment. The executive summary from the report is included as an attachment.



Item No: 12

Meeting Date: 10 December 2010

As represented in the following diagram, the Deloitte report found that Seqwater had improved from the "Unaware to Fragmented" level in September 2009 to a level that is currently at the interchange point between "Top Down and Systematic".



#### **OPPORTUNITIES FOR IMPROVEMENT**

As requested, Deloitte also identified opportunities for improvement to ensure Seqwater continues to move through the maturity curve. They are summarised as follows:

- Expand the categories of the Enterprise Risk Register to incorporate Strategy and Planning, Operations/Infrastructure, Compliance and Reporting.
- Risk reporting to the Board should be expanded to include additional data on the risk management program.
- Ensure consistent format between enterprise and operational risk registers.
- Provide further explanation around Seqwater's risk tolerance.
- Risk Consequence Table to incorporate project management performance criteria based on cost/time overruns (e.g. 15% variance to cost or time is deemed catastrophic).
- Other requirements for risk management activities are acknowledged within the existing risk management procedure (i.e. not just risk registers).



Item No: 12

Meeting Date: 10 December 2010

#### **NEXT STEPS**

From this report, the following actions are recommended:

- 1. The Principal Risk Advisor will consult with management to consider the suggestions for improvement.
- 2. A program of work will be developed for the remainder of 2010-11 to respond to these improvements.
- 3. The progress of these improvements will be reported to the Board.

Manager Legal and Risk

Sarah Zeljko

Executive General Manager - Business Services



# **Deloitte**

Seqwater

Risk Management Framework Desktop Capability Evaluation

November 2010

# 1 Executive Summary

## 1.1 Introduction

Seqwater ("Seqwater") engaged Deloitte to conduct a desktop evaluation of its existing risk management framework. The desktop evaluation was conducted using the Deloitte Risk Management HealthCheck<sup>TM</sup> tool and its underlying principles based on a Risk Intelligent organisation. Our findings and associated opportunities for improvement are informed by and based on the documentation supplied by Seqwater.

# 1.2 Key findings

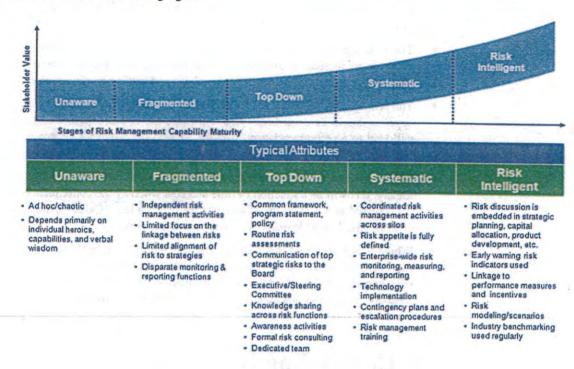
The key findings from our evaluation are as follows:

- A Risk Management Policy has been established and is supported by the risk management framework which is in draft form. This is based on the requirements of the draft SEQ Water Grid Risk Management Plan prepared by the SEQ Water Grid Manager (SEQWGM). It is expected to be signed off following the approval of the draft SEQ Water Grid Risk Management Plan by the Minister. A Corporate Risk Management Procedure documents how risk is to be identified, assessed, evaluated, mitigated and reported on by the organisation.
- Risk governance arrangements are in place including the board and its Audit Committee.
   Specific risk roles and responsibilities for the board, senior executive leadership team (ELT),
   Principal Risk Advisor, the Risk Assessment Team (Water Rats) and employees in general are included in the draft Risk Management Framework.
- An enterprise level risk register has been established for Seqwater. This forms the basis of the "top-down" risk assessment and reporting arrangements.
- Operational risk assessments have been completed at various levels within the business units
  and include workplace health and safety, environmental, projects, ICT, procurement,
  catchment and water quality (via the HACCP program). These form the basis of the
  "bottom-up" risk assessments and reporting arrangements.
- The depth and detail of documentation of operational risk assessments vary between the business units.
- Enterprise and priority risks represent the material risks to Seqwater which are routinely
  reported as part of the board reporting requirements. The actual reporting arrangements have
  continued to evolve over the last 18 months at the direction of the board.
- Responsibilities for risk management are documented in the draft Risk Management
  Framework. Accountability arrangements for risks in the enterprise and operational risk
  registers are nominated as part of the definition of a "risk owner" (as defined in the Corporate
  Risk Management Procedure). The allocation of responsibilities for risk mitigation activities
  is assumed to be part of the "risk owners" requirements.
- All business units have not established or updated risk registers regularly. The requirements
  for bottom-up reporting do not clearly define how different business units should contribute
  to the reporting and on what basis.
- Insurance arrangements are incorporated into the risk program. This has included an insurable risk review and presentation of the findings to the board.

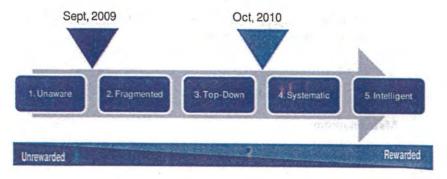
Deloitte: Seqwater - Desktop Risk Management Framework Capability Evaluation Report

# 1.3 Indicative Risk Maturity

The indicators of the level of maturity in a risk management program, as defined by Risk Intelligence, are as described in the following figure.



Comparing the findings as outlined above and as detailed in Sections 3 and 4, it is clear that significant progress has been made over the last 12 to 18 months. Through our discussions and evaluation of documentation provided, a comparison of the findings and recommendations to the above criteria, data suggest the maturity of risk management would be between "Unaware" to "Fragmented". Our report and its findings suggest Seqwater's current maturity rating is at the interchange between "Top Down" and "Systematic". This is graphically presented in the following figure.



# 1.4 Opportunities for improvement

Irrespective of the fact that significant progress has been achieved, and based on the observations and findings noted above and presented in detail within this report, we provide the following key opportunities for improvement:

Deloitte: Seqwater - Desktop Risk Management Framework Capability Evaluation Report

- Introduction of risk categories for the enterprise level risk register that allows better presentation
  of the risks and alignment of them to Sequater's corporate objectives. Suggested categories are
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  will lead to a recommendation from the ELT to the board for approval. Subsequent reviews of
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As a concluding comment it is acknowledged that there has been significant progress in the development of the risk management framework that is in place within Seqwater. Our report provides detailed information on the findings. In addition to this, we provide for Seqwater's consideration a range of improvement opportunities that continue the development of better practice risk management systems.

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We wish to place on record our appreciation of the assistance and cooperation of Mr Jeff Lyddon of Seqwater in completing the work plan.

Matt Thomson

Partner



Item No: 12

Meeting Date: 10 December 2010

Prepared By: Jeff Lyddon, Principal Risk Advisor

Presented By: Helen Moore, Executive General Manager – Business Services

Attachments: Executive Summary – Desktop Capability Evaluation

#### RECOMMENDATION

That the Audit Committee notes the Risk Management Framework Desktop Capability Evaluation report as prepared by Deloitte.

#### BACKGROUND

During September 2009, KPMG undertook an "As Is" review of Seqwater's risk management framework. The four areas identified as key concerns were:

- 1. No agreed framework had been set for implementation.
- 2. No set of risk management guidelines.
- 3. A lack of defined roles and responsibilities.
- 4. No formalised reporting structure.

On this basis, a program of work commenced to establish a risk management framework for Seqwater within the context of the supply chain.

This work has subsequently led to the establishment of:

- A risk governance structure also incorporating the Board and the Audit Committee.
- A strategic Enterprise Risk Register which is reported to the Board quarterly.
- The operational Priority Risks which are reported to the Board monthly.
- · Operational risk registers which determine the risk priorities.
- A Risk Management Framework which contributes to the strategic and operational planning process.
- A Risk Assessment Team which consists of representatives from across the business.
- Defined roles and responsibilities relating to risk for Executive Leadership Team (ELT), Principal Risk Advisor, the Risk Assessment Team and general employees.
- A process to escalate identified grid-wide extreme and high risks to the SEQ Water Grid Manager for assessment by the Risk Officers' Committee (ROC).
- · Consolidated risk assessment tools across Segwater.

#### **DESKTOP CAPABILITY EVALUATION (FINDINGS)**

To ensure that Seqwater was demonstrating good risk management practice, Deloitte was engaged in October 2010 to conduct a desktop evaluation of progress since the 2009 KPMG review.

Deloitte was asked to assess capability maturity and suggest any improvements. It should be noted that this assessment was conducted at a high level and should not be considered to be an audit.

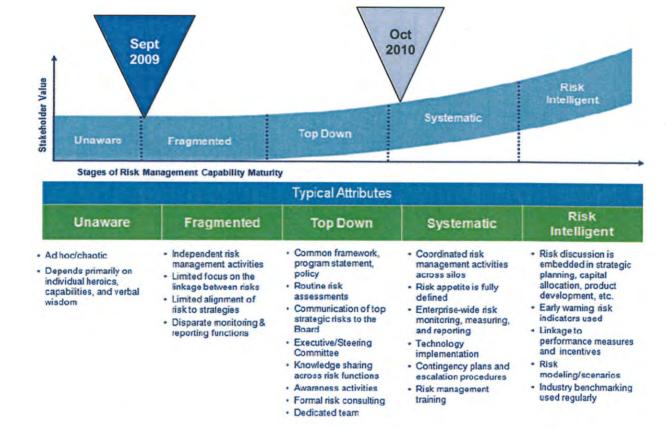
It should also be noted that a comparison was made between the KPMG Review in 2009 and the findings from Deloitte to ensure that consistency was maintained throughout this assessment. The executive summary from the report is included as an attachment.



Item No: 12

Meeting Date: 10 December 2010

As represented in the following diagram, the Deloitte report found that Seqwater had improved from the "Unaware to Fragmented" level in September 2009 to a level that is currently at the interchange point between "Top Down and Systematic".



#### **OPPORTUNITIES FOR IMPROVEMENT**

As requested, Deloitte also identified opportunities for improvement to ensure Seqwater continues to move through the maturity curve. They are summarised as follows:

- Expand the categories of the Enterprise Risk Register to incorporate Strategy and Planning, Operations/Infrastructure, Compliance and Reporting.
- Risk reporting to the Board should be expanded to include additional data on the risk management program.
- Ensure consistent format between enterprise and operational risk registers.
- Provide further explanation around Seqwater's risk tolerance.
- Risk Consequence Table to incorporate project management performance criteria based on cost/time overruns (e.g. 15% variance to cost or time is deemed catastrophic).
- Other requirements for risk management activities are acknowledged within the existing risk management procedure (i.e. not just risk registers).



Item No: 12

Meeting Date: 10 December 2010

#### **NEXT STEPS**

From this report, the following actions are recommended:

- 1. The Principal Risk Advisor will consult with management to consider the suggestions for improvement.
- 2. A program of work will be developed for the remainder of 2010-11 to respond to these improvements.
- 3. The progress of these improvements will be reported to the Board.

Manager Legal and Risk

Sarah Zeljko

Executive General Manager - Business Services



# **Deloitte**

Seqwater

Risk Management Framework Desktop Capability Evaluation

November 2010

# 1 Executive Summary

## 1.1 Introduction

Seqwater ("Seqwater") engaged Deloitte to conduct a desktop evaluation of its existing risk management framework. The desktop evaluation was conducted using the Deloitte Risk Management HealthCheck<sup>TM</sup> tool and its underlying principles based on a Risk Intelligent organisation. Our findings and associated opportunities for improvement are informed by and based on the documentation supplied by Seqwater.

# 1.2 Key findings

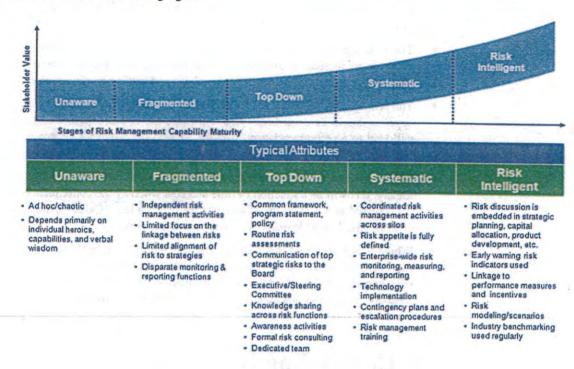
The key findings from our evaluation are as follows:

- A Risk Management Policy has been established and is supported by the risk management framework which is in draft form. This is based on the requirements of the draft SEQ Water Grid Risk Management Plan prepared by the SEQ Water Grid Manager (SEQWGM). It is expected to be signed off following the approval of the draft SEQ Water Grid Risk Management Plan by the Minister. A Corporate Risk Management Procedure documents how risk is to be identified, assessed, evaluated, mitigated and reported on by the organisation.
- Risk governance arrangements are in place including the board and its Audit Committee.
   Specific risk roles and responsibilities for the board, senior executive leadership team (ELT),
   Principal Risk Advisor, the Risk Assessment Team (Water Rats) and employees in general are included in the draft Risk Management Framework.
- An enterprise level risk register has been established for Seqwater. This forms the basis of the "top-down" risk assessment and reporting arrangements.
- Operational risk assessments have been completed at various levels within the business units
  and include workplace health and safety, environmental, projects, ICT, procurement,
  catchment and water quality (via the HACCP program). These form the basis of the
  "bottom-up" risk assessments and reporting arrangements.
- The depth and detail of documentation of operational risk assessments vary between the business units.
- Enterprise and priority risks represent the material risks to Seqwater which are routinely
  reported as part of the board reporting requirements. The actual reporting arrangements have
  continued to evolve over the last 18 months at the direction of the board.
- Responsibilities for risk management are documented in the draft Risk Management
  Framework. Accountability arrangements for risks in the enterprise and operational risk
  registers are nominated as part of the definition of a "risk owner" (as defined in the Corporate
  Risk Management Procedure). The allocation of responsibilities for risk mitigation activities
  is assumed to be part of the "risk owners" requirements.
- All business units have not established or updated risk registers regularly. The requirements
  for bottom-up reporting do not clearly define how different business units should contribute
  to the reporting and on what basis.
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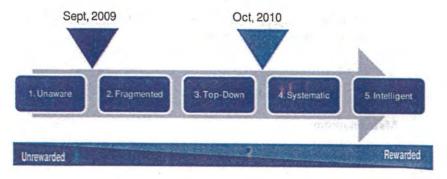
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Matt Thomson

Partner

# QUEENSLAND BULK WATER SUPPLY AUTHORITY MINUTES OF MEETING OF THE AUDIT COMMITTEE (No 16) HELD AT LEVEL 3, 240 MARGARET STREET, BRISBANE on Friday 10 December 2010 commencing at 2.00pm

#### 1. ATTENDANCE AND APOLOGIES

#### Present

Mr I Fraser (Chairman)

Ms L Boully

Mr P Hennessy

#### **Apologies**

Mr T Fenwick

Mr P Borrows

Mr M Booth (Queensland Audit Office)

#### In Attendance

Mrs T Lake (Corporate Counsel and Board Secretary) - Minute Secretary

Mrs H Moore (Executive General Manager, Business Services)

Mrs J McKenzie (Financial Controller)

Mrs S Zeljko (Manager Legal & Risk)

Ms M Comino (Principal Compliance Adviser)

Mrs C Crane (Manager ICT Services)

Mr M Petrie (KPMG)

Ms J Thornley (Queensland Audit Office)

#### 2. CONFIRMATION OF MINUTES OF MEETING HELD ON 11 OCTOBER 2010

It was **RESOLVED** that the Minutes of the Meeting of the Committee held on 11 October 2010 be confirmed as a true and accurate record and that the Minutes be signed by the Chairman.

#### 3. ACTION ITEMS REGISTER

The Committee had before it an Action Items Register. Helen Moore spoke to the register and a discussion was held on the items within the register.

QBWSA Audit Committee Minutes\10December2010finalapproved

Further to the discussion, it was RESOLVED -

- (1) to note the Action Items Register on the basis that it contained a review of all action items, which had been completed or were in the process of receiving appropriate attention; and
- (2) that the Audit Committee Meeting Calendar be updated to include the additional reports that are to be submitted to the Committee on a regular basis in response to Committee requests (such as the Contingent Assets and Liabilities Register).

#### 4. INTERNAL AUDIT STATUS REPORT 2010-2011

The Committee had before it a paper entitled "Internal Audit Status Report". Helen Moore and Mitchell Petrie spoke to the paper and a discussion was held regarding the attachments to the paper. Phil Hennessy and Mitchell Petrie offered to leave the meeting to enable a discussion to occur in respect of the internal audit fees section of the report, however, the other Committee Members confirmed they did not require a discussion of those fees, which were simply noted.

Further to the discussion, it was RESOLVED to note -

- (1) the status report from Internal Audit on progress of the reviews that were conducted in 2010-11:
- (2) the current review regarding Land and Property Management processes has been completed;
- (3) that the Chairman will be advised of the responsible officer identified to action the internal audit findings in the Land and Property Management Processes report; and
- (4) that future summaries of completed internal audits will include details of the responsible officers identified to action internal audit findings.

#### 5. MANAGEMENT ACTIONS ON INTERNAL AUDIT FINDINGS

The Committee had before it a paper entitled "Management Actions on Internal Audit Findings". Helen Moore spoke to the paper and a discussion was held in respect of the progress report attached to the paper.

Further to the discussion, it was **RESOLVED** to note the action taken by Management since the last Committee meeting to address and close-out outstanding Internal Audit findings.

#### 6. EXTERNAL AUDIT BRIEFING NOTE AND CLIENT STRATEGY

The Committee had before it a paper entitled "External Audit Briefing Note and Client Strategy" and the Queensland Audit Office Briefing Note for 10 December 2010. Jackie Thornley spoke to the Briefing Note and the attachments to the paper. A detailed discussion

was held regarding the Key Developments and Risks sections of the Briefing Note and the need to identify the implications of the announced merger for the Audit Committee, internal audit and external audit was noted.

Helen Moore briefly outlined to the Committee the current fraud issues being addressed by the Authority and it was noted that, as a result of these issues, actioning of the Fraud Framework internal audit action items would now be accelerated.

Further to the discussion, it was RESOLVED -

- (1) to approve the External Audit Client Strategy for the financial year 2010-2011;
- (2) that an update be provided to the next Committee meeting regarding the Authority's fraud risk categories and Management's progress in addressing the Fraud Framework internal audit action items; and
- (3) to invite the Manager Procurement to the next Committee meeting to report on the status of procurement processes and controls.

#### 7. MANAGEMENT ACTIONS ON EXTERNAL AUDIT FINDINGS

The Committee had before it a paper entitled "Management Actions on External Audit Findings". Juliet McKenzie spoke to the paper and its attachment. Further to the discussion, it was RESOLVED to note the action taken by Management since the last Committee meeting to address and close-out outstanding external audit findings.

#### 8. CONTINGENT ASSETS AND LIABILITIES

The Committee had before it a paper entitled "Contingent Assets and Liabilities". Juliet McKenzie spoke to the paper and its attachment. A discussion was held regarding the content of the Contingent Assets and Liabilities Register attached to the paper and specifically in relation to the new guarantee provided to Stanwell Corporation Limited for the Wivenhoe Hydro Plant. Further to the discussion, it was **RESOLVED** to note the Contingent Assets and Liabilities Register.

#### 9. CASH MANAGEMENT POLICY

The Committee had before it a paper entitled "Cash Management Policy". Juliet McKenzie spoke to the paper and its attachments. Further to the discussion, it was RESOLVED to —

- (1) note the change in the long term optimal cash balance from \$60million to \$20million. This will be maintained by utilising the working capital facility and any excess funds will transfer to the redraw facility;
- (2) note the 2010-2011 equity injection of \$73.4million will be deposited to the redraw facility upon receipt; and

- (3) note the Cash Management Framework is confirmed as follows -
  - the long term optimal cash and cash equivalents balance is \$20million;
  - the working capital facility of \$60million will be utilised to effectively manage short term liquidity requirements, fund capital requirements and mitigate against receivables risk;
  - future funding for maintaining and enhancing capital will be met from the long term optimal cash (\$20million) and cash equivalents balance in the first instance and from funds invested through the QTC Redraw Facility thereafter;
  - that the long term optimal cash and cash equivalents balance will be used to fund the Authority's deferred tax liabilities and any annual return (dividend) payments, as and when they fall due;
  - in the event that cash surpluses continue to grow, further long term debt repayment may be undertaken by Management using the QTC Redraw Facility; and
  - funds repaid through the Redraw Facility will be allocated to the Non-Drought debt first.

#### 10. DELEGATIONS POLICY & DELEGATIONS MANUAL

The Committee had before it a paper entitled "Delegations Policy & Delegations Manual". Helen Moore and Sarah Zeljko spoke to the paper and its attachments. A discussion was held regarding the policy and manual attached to the paper. Further to the discussion, it was **RESOLVED** –

- (1) to recommend the Delegations Policy (attached to the paper) to the Board for approval;
- (2) subject to the amendments requested by the Committee being incorporated, to recommend the Delegations Manual to the Board for approval;
- (3) that clarification be provided as to where the items contained in the Recommended Deletions (Attachment B to the paper) will be recorded; and
- (4) that an Executive Management Recruitment and Remuneration Policy be submitted to the Board.

#### 11. COMPLIANCE PROGRAM

The Committee had before it a paper entitled "Compliance Program". Helen Moore, Sarah Zeljko and Maria Comino spoke to the paper and a discussion was held regarding progress with the Compliance Program.

Further to the discussion, it was RESOLVED -

- (1) to note the progress with implementation of the Compliance Program; and
- (2) that a report on the Authority's current compliance position will be submitted to each Committee meeting.

#### 12. RISK MANAGEMENT FRAMEWORK - MATURITY ASSESSMENT

The Committee had before it a paper entitled "Risk Management Framework - Maturity Assessment". Helen Moore and Sarah Zeljko spoke to the paper and a discussion was held regarding the Desktop Capability Evaluation Report attached to the paper. Further to the discussion, it was RESOLVED —

- (1) to note the Risk Management Framework Desktop Capability Evaluation report as prepared by Deloitte; and
- (2) that the Chairman be advised as to the cost of the report.

#### 13. CIS IMPLEMENTATION

The Committee had before it a paper entitled "CIS Implementation". Helen Moore and Cynthia Crane spoke to the paper and a discussion was held regarding progress of the project.

Further to the discussion, it was RESOLVED to note -

- the progress against the approved Project Schedule (being Attachment A to the paper);
   and
- (2) the revised Risk Register and mitigating actions (being Attachment B to the paper).

### 14. DISASTER RECOVERY IMPROVEMENT PROJECT - PROGRESS UPDATE

The Committee had before it a paper entitled "Disaster Recovery Improvement Project — Progress Update". Cynthia Crane spoke to the paper and a discussion was held regarding the project update. The current disaster recovery arrangements were regarded as satisfactory. Further to the discussion, it was **RESOLVED** to note the progress of the Disaster Recovery Improvement Project.

#### 15. ANNUAL AUDIT COMMITTEE CALENDAR AND AGENDA

It was RESOLVED -

- (1) to note the annual calendar for planning its agenda for future meetings; and
- (2) that the calendar will be updated to include the additional reports that are to be submitted to the Committee on a regular basis in response to Committee requests.

#### 16. GLOSSARY OF TERMS

It was RESOLVED to note the contents of the Glossary of Terms.

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### 17. PROPOSED MEETING DATES

It was noted that the next scheduled meeting of the Committee was Monday 14 March 2011.

#### 18. CLOSE

There being no further business, the meeting closed at 4.50pm.

14. 2. 11

# Deloitte

# Seqwater

Risk Management Framework Desktop Capability Evaluation

November 2010

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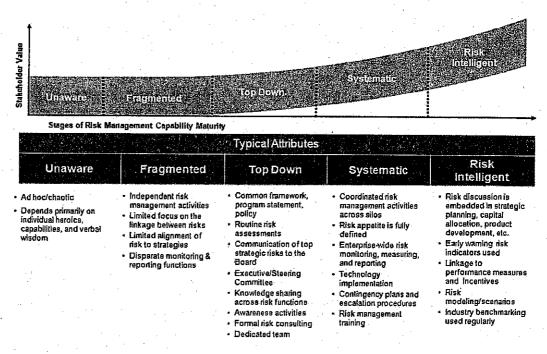
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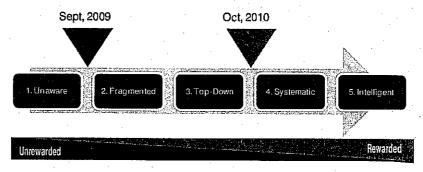
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# **DRAFT MEETING NOTES & ACTIONS**

Queensland Bulk Water Supply Authority, trading as Seqwater

### **Weekly Management Team Meeting**

17 February 2010, 2.00pm to 5.00pm

Segwater Boardroom, Level 3, 240 Margaret Street, Brisbane

Meeting No. 73

**Attendees:** 

Bill Andrew (BA), Peter Borrows (PCB), Alex Fisher (AF), Helen Moore (HM),

Arnou Pruden (ALP) and Jim Pruss (JP)

For Item 2, Arun Pratap

For Item 3, John Orange, Peter Schneider and James Udy

For Item 4, Juliet McKenzie and Megan Naylor For Item 5, Steve Schiffman (consultant)

Chairperson:

Helen Moore

Note-taker:

Arnou Pruden

#### ITEM, NOTES & ACTIONS

RESPONSIBLE FOR ACTION

Items for General Business (to be discussed at the end of the meeting) were provided.

It was noted that Alex Fisher will be required to leave the meeting at 4.15pm.

Alex Fisher and Bill Andrew joined the meeting at 2.23pm.

The meeting opened at 2.23pm.

It was agreed that a confidential discussion would be held between the Management Team members. Accordingly, Arnou Pruden left the meeting.

Arnou Pruden re-joined the meeting at approximately 2.35pm.

Arun Pratap joined the meeting at 2.35pm.

<u>"Soft Start" for New Structure</u> – PCB requested that a "soft start" of the new organisational structure begin now, whereby all staff operate under the new structure, and report through to their relevant EGM.

ALL

#### Item 1 - Update following Board Meeting of 5 February 2010

Given late meeting start, will be completed out of session as required.

#### Item 2 - Draft Board Papers

The draft Board Paper on Stakeholder Engagement & Positioning Strategy was discussed
and endorsed on the basis that it is presented as a broad concept, that Step 5 of the Strategy
is expanded upon, that the context (timing of work on values / restructure, etc) is outlined at
the start of the Board Paper, and that the purpose of this work is outlined verbally when the
paper is presented.

BA (A.Pratap)

- PCB advised that he would like some more time to review this draft Board Paper in the context of Segwater's role as part of the Water Grid as a whole and the community.
- It was advised that this item should be starred on the Board Agenda.
- The draft Board Agenda was discussed and endorsed subject to JP's advice (following discussion with Arran Canning) regarding how long will be required for the Board Presentation. It was agreed that the Presentation is to start at 8.00am.

 It was agreed that BA is to discuss Board Agenda Item 7 (2010-2011 Strategic and Operational Plan) with Bruce Mortimer.

• <u>In relation to the "Board Presentation"</u>, it was agreed that this is to start at 8.00am, and that JP is to advise of the finish time following discussion with Arran Canning.

 It was advised that responsibility for future Board Presentations, and also responsibility for the compilation of the Board Agenda in future, will be discussed further at the EGM Catch-up meeting on Monday. PCB

BA (A.Pratap)

JΡ

ВА

John Orange, Peter Schneider and James Udy joined the meeting at 3.00pm.

#### Item 3 - Land and Water Quality Research - Proposed Governance Framework

- James Udy made a PowerPoint presentation to the meeting group about Land and WQ Research Program activities.
- PCB indicated concern at the current lack of a research program (including risk mitigation, and prioritising research accordingly) for the organisation as a whole, and asked how it might be determined where to focus efforts in research and mitigating risks. (Especially in the context of Seqwater now being more politically exposed - now that it is part of the State Government.)
- JO advised that this particular Research Plan has been developed, identifying priorities for research, and that we would now look at how to fund, but acknowledged that this does not address PCB's question (above) about "relative resourcing" – resourcing for this research compared to other work / research required within the business.)
- JP suggested that PCB's question (above) might be answered by possibly engaging an expert, and presenting the findings to Seqwater's internal Major Projects Taskforce.
- AF raised the requirement to integrate the Research Governance Framework back into the Asset Delivery Group's Asset Policy and Planning work.
- The recommendations of the briefing paper (listed below) were endorsed in order to complete the required budget work, and on the basis that there will be input by the cross-organisational working party, so that it can identify resourcing as appropriate. It was agreed that AF is to write her recommendation for these meeting notes.

1. That the proposed Research Governance Framework, including:

- The establishment of a Cross-Organisational Working Party to support the identification and prioritisation of LWQ research activity in Segwater;
- The alignment of the LWQ research plan and budget with the Seqwater Strategic Plan and Budget process;

c. The proposed LWQ research project identification and selection criteria:

d. The consideration of the renewal / extension of research partnerships as part of the LWQ budget process; and the approach to identifying and documenting the most appropriate LWQ research project delivery mode;

e. The proposed reporting structure and approach;

- f. The mechanism for identifying and considering changing priorities and new research opportunities throughout the year.
- On the basis of the above endorsement conditions, the Research Governance Framework will be used in the preparation of the 2010/11 LWQ Research Plan and Budget;
- 3. The Land and Water Quality Team, with their nominated Project Spensor's, need to work collaboratively with the Chief Economist to ensure that, where there is not a direct and unambiguous commercial outcome from research activity, it is incorporated into Seqwater's regulated expenditure by the QWC and the QCA.

John Orange, Peter Schneider and James Udy left the meeting at 3.47pm.

Juliet McKenzie, Megan Naylor and Damian Scholz joined the meeting at 3.50pm.

#### Item 4 - Second Quarter Budget Reforecast 2009/10

- Megan Naylor provided an overview of the report (dated 16 February), which provided just prior to the meeting.
- It was noted that this reforecast has been completed for internal administrative purposes (for lodgement with Tri-Data) because Seqwater is behind on Capital Expenditure.
- In relation to the update to the Board on the Second Quarter, it was requested that, for any items deferred to next year, there should be a note included regarding how this affects Seqwater's risk profile. It was also requested that there be a noted included in the Board Paper regarding the impact of not having completed the Dam Safety work.

 Juliet McKenzie advised that a column for this reforecast will be included on the Balance Sheet in the Board Papers.

- The Management Team considered and approved the Second Quarter budget reforecast for input into a 5-year forecast, for lodgement with Tri-Data by this Friday, subject to the amendments noted above.
- AP was requested to advise Arun Pratap and Cheryll Young that this will be a late Board Paper.

Juliet McKenzie, Megan Naylor and Damian Scholz left the meeting at 4.16pm.

Alex Fisher also left the meeting.

ΑF

HM (JM & MN)

HM (JM & MN)

AP

Steve Schiffman and Jennifer Martyn joined the meeting at 4.20pm.

#### Item 5 - Terms of Reference for Tender Committee

 The Management Team discussed and endorsed the establishment of a "Tender Committee", subject to any further input from Alex Fisher into the Terms of Reference.

ΑF

Steve Schiffman and Jennifer Martyn left the meeting.

#### Item 6 - Exiting from SLA's with Councils

The Management Team noted the document containing "Issues to Note", and agreed that
John Armstrong is to be responsible for ensuring that the necessary arrangements are
obtained as detailed in the document, and that completion of this is subject to JP firstly
reviewing the documents and advising John Armstrong of any issues by the end of the
week.

JP.

 JP advised that he will review the documents and advise John Armstrong of any issues by the end of the week.

#### Item 7 - Insurance Settlement - Caboonbah Homestead

The Management Team endorsed the first 2 recommendations of the submission.

НМ

- In relation to the application of insurance settlement funds, it was requested that a briefing
  note be prepared for the Chairman based on the submission notes. It was requested that the
  Briefing Note includes Seqwater's desired strategic direction for this site (in consultation with
  Alex Fisher and Donna Gregory) and evaluation of Somerset Regional Council's requests.
  PCB advised that he is happy to discuss this with AF if required.
- The Management Team noted the efforts required for the valuation of the heritage listed assets, including the flow on impacts for financial and insurance reporting.

#### Item 8 - SEQ Water Grid Scenario Exercise

- The briefing paper on the SEQ Water Grid Scenario Exercise was noted.
- The Pre-Exercise "MATRIX" Handouts were noted.

 It was requested that EGM's provide a copy of the handouts to their relevant staff for their information. EGM's

- PCB advised that the purpose of this exercise is to give confidence to the Minister about the
  preparedness of the Grid participants in the event of a major incident. It was indicated that
  the focus of this exercise is one a "learning opportunity" for the Grid participants.
- The preparedness approach was discussed and endorsed.

#### Item 9 - Board Papers (continued from Item 2 above)

The draft Board Paper on Risk Management was discussed. HM was requested to ask
Jeff Lyddon to re-word, in consultation with JP, and re-submit to EMT for approval. It was
also requested that the words "affecting our reputation" be removed.

HM (JL)

#### Item 10 - General Business

- <u>CEO's meeting with Minister Robertson today</u> PCB provided a verbal update. (No meeting notes required.)
- <u>Update on SCADA</u> JP advised that a governance framework is being compiled, for submission to a future EMT Meeting.
- Website hits "Good News Story" HM advised that Seqwater's website has now had nearly 1,000,000 hits.
- <u>Update on Streamline Survey</u> -- BA advised that 55% of staff have completed this online survey.
- <u>Executive Team Building with Rebekah O'Rourke</u> BA tabled an outline of next week's Executive Team Building session.

The meeting closed at 5.09pm.

# **DRAFT MEETING NOTES & ACTIONS**

Queensland Bulk Water Supply Authority, trading as Seqwater

### **Weekly Management Team Meeting**

26 May 2010, 8.45am to 11.45am

Seqwater Boardroom, Level 3, 240 Margaret Street, Brisbane

Meeting No. 81

CEO's Report.

the last para.

Attendees:

Peter Borrows (PCB), Chris Elston (CE), Alex Fisher (AF), Helen Moore (HM),

Arnou Pruden (AP) and Jim Pruss (JP)

For Item 1, Toni Lake

**Chairperson:** 

Helen Moore

ÎTEM, NOTES & ÁCTIONS	RESPONSIBLE FOR ACTION
The meeting opened at 8.55am.	
<ul> <li>Item 1 – Agenda and Board Papers for 11 June 2010 Board Meeting</li> <li>The draft Board Agenda was approved subject to the following amendments:         <ul> <li>That the timing be as follows: 8.00-8.45am – Presentation on "Water Delivery – Majo Areas of Focus – 2010/11 and 2011/12"; 8.45-9.30am – Presentation on "2010-1" Capital Works Program Update"; 9.30am – Start Board Meeting.</li> <li>That the dates noted in title of the Water Delivery presentation be corrected.</li> <li>That Item 11 - "Sponsorship Program Funding" is removed from the Agenda. It was requested that this instead be included as a note in the CEO's Report and Information Kit.</li> </ul> </li> </ul>	3
<ul> <li>In relation to Agenda Item 15 – "Grid Services Contract" – Toni Lake advised that this will be a late Board Paper. It was agreed that this is to remain an item on the agenda.</li> <li>The draft WHS Board Paper was approved subject to the following:         <ul> <li>That the vehicle detail appears in the Board Papers Information Kit, rather than as part of the recommendation, and that statistics on utes be included.</li> <li>That CE liaises with both Melanie McGaw and Jeff Lyddon to address in the paper the Board's concern about exposure (in the case of an accident) during the gap between having identified risks and completion of the roll-out of WHS.</li> </ul> </li> </ul>	CE f
<ul> <li>It was suggested that "lead indicators" be highlighted (eg; progress on safety and awareness; 'Streamline' survey output.</li> <li>In relation to the draft SEQ Fluoridation Stage 2 Progress Report, AF provided a verbal update. It was suggested that this be raised verbally at ELT Meetings in future, and that the Board Paper be provided to Toni Lake by the due date for all Board Papers. It was requested that the following be included in the Board Paper: <ul> <li>that updates to have been provided to DIP, who have not expressed any concern;</li> <li>that this was raised at yesterday's Ministers Meeting, and that there was no concern;</li> <li>Queensland Health reporting – PCB advised that the issue that we may go into July, and that it will affect public reporting, was raised at the Minister's Meeting. Seqwater was requested to let DIP know what of the problems it is experiencing, which might help them to assist Seqwater in regional reporting.</li> </ul> </li></ul>	AF
<ul> <li>The draft Risk Management Board Paper was approved subject to the following amendments:</li> <li>ERR 1.2 -address the "tense".</li> <li>ERR Ref. 2.1 -include a point about the implications of cost to the Grid.</li> <li>ERR 3.2 under "Progress" column - third para - first line - remove "is also a".</li> </ul>	нм

ERR 6.2 - "Progress" colum - delete existing wording and make reference to update in

The draft "Change of Corporate Status for South East Queensland Water Corporation Limited" Board Paper was approved subject to correction of the typing error in the first line of

НМ

ΑF

НМ

НМ

HM

CE

CE

CE

- The draft Energy Procurement Board Paper was approved subject to the following amendments:
  - that clarification is provided in relation to what the Board is being asking for approval on (matching timing with dollars);
  - that the section on O&M contracts (duration) needs to be reviewed that the facts are confirmed and clarified - and in context that LinkWater's O&M has changed.
  - That the sentence including "impediment" is removed.
  - That the overall context and flow of the Board Paper is reviewed and updated.
  - It was agreed to aim for 10% and to monitor, but will come back to Board if it is anticipated to be either a budgetary (over 10%) or regulatory issue.

Toni Lake left the meeting at 9.34am.

#### Item 2 - Corporate Risk Management Procedure

- AF recommended that the Briefing Paper should flag that the Corporate Risk Management Procedure will apply not only corporate-wide but also to projects. AF was requested to ask her new appointee to come up with some wording to address this.
  - AF recommended that we specify how we frame (define and describe) risks (cause and HM effect), which assists with work on Likelihood and Consequence.
- It was noted that an escalation is event-based (incident) rather than a risk to business.
- Consequence Table consistency needs to be reviewed. (Example provided was first row -"Serious Environmental Harm caused – \$50,000 to address")
- Likelihood Table HM advised that the "readability" of this will be improved.
- Following a recommendation from CE that there be consistent application, an effective date and an education program, it was agreed that the Water RATS are to review this, and that a separate meeting is to be scheduled for the ELT to discuss this.

#### Item 3 - Issues Raised by APESMA in relation to certain contract staff

- The ELT noted that APESMA are seeking additional compensation for certain contract staff employed by Seqwater.
- Following a summary and further detailed information from CE, the ELT approved the recommendation that no action will be taken to transition the relevant Contract staff onto the EBA prior to the expiry of their current employment contract.

#### Item 4 - Application of Pay Increments for EBA Staff

- Following discussion, the ELT decided that any newly-recruited EBA staff are to be paid the base level (Pay Point 1) of the position's Work Value.
- The ELT agreed with the recommendation that "fast-tracking" staff through pay increment increases will not be utilised within Segwater.
- The ELT noted the situation in relation to pay points in the Work Value assessment process, as per the Seqwater EBA. It was requested that the policy wording be amended to reflect that if the Work Value Assessment places a staff member at the highest increment of their pay band, then they will receive only the EB increase (following successful performance review),

#### Item 5 - Leadership Team Meeting Attendees

The ELT endorsed the recommendation that the Leadership Team meeting attendees be determined as per the individuals occupying the positions as set out in the attached Organisational Chart, subject to Toni Lake being added, and that this be effective for the July 2010 Leadership Team Meeting.

The group took a break at 10.27am and reconvened at 10.39am.

#### Item 6 - Agenda Items for Leadership Team Meeting of 2 June 2010

- 2 June 2010 Leadership Team Meeting Following discussion, it was agreed that the agenda items are to be as follows: CEO Update, Safety Highlights (expanded), PIP Program; Environmental Scan (Bruce Mortimer); Year in Review and workshop what goes into the Annual Report (1 hour - Mike Foster); Close-out and thank you for outgoing Leadership Team Members (CE to discuss with Mike Foster who best to do this).
- 7 July 2010 Leadership Team Meeting: Following discussion, it was agreed that the agenda items are to be as follows: Welcome to new group; revisit structure, teams, who does what, etc; Values; Integration; Operational and Strategic Plans (Bruce Mortimer).

CE

CE

ITEM; NOTES & ACTIONS	RESPONSIBLE FOR ACTION
<ul> <li>Item 7 – Personal Improvement Program (PIP) 2010/11</li> <li>It was advised that this item's Briefing paper will be re-written, in order to change the tone (as per discussions between PCB and CE).</li> </ul>	CE
<ul> <li>The ELT endorsed the PIP concept.</li> <li>The ELT endorsed the recommendation that the PIP concept to be raised at the 2 June 2010 Leadership Team Meeting for discussion.</li> </ul>	CE
The ELT endorsed the recommendation that the People and Capability Team to finalise the PIP procedure, including all documentation / materials, etc, for the 2 June 2010 ELT Meeting.	CE
Following a query from CE, it was agreed that the proposed PIP could be noted in the CEO's Report.	CE
Item 8 – WHS Logo	05
<ul> <li>Following discussion, the ELT endorsed Version 8 of the proposed WHS logos for use.</li> </ul>	CE
Item 9 – WHS Hazardous Substance / Dangerous Goods / Evacuation Plans and Fire Safety Audits	
<ul> <li>JP to action co-ordination of appropriate disposal of hazardous substances in laboratories that have exceeded their expiry date or are not in use. JP to include a timeframe on completion of this.</li> </ul>	JP
<ul> <li>Procurement to consider the implications of ordering broadly and from multiple sources – it was suggested that this should be done at the source of procurement (not by the Procurement Team). CE to provide revised wording for recommendation to AP.</li> </ul>	
CE to amend timeframes to make them specific (rather than ongoing) and build into the Board Paper the confidence changes.	CE
<ul> <li>CE to look at how to get audit planning process undertaken in consultation with the appropriate ELT members, for there to be agreement on the Audit outcomes and for ELT</li> </ul>	CE
member to nominate representative to lead a particular programme (regarding accountabilities onsite).	CE
Fire Evacuation – HM will coordinate via Facilities and provide timeframes.	НМ
Item 10 – WHS Consultative Committee Meeting	
<ul> <li>In relation to the Minutes of WHS Consultative Committee Meeting held on 22 March 2010, the ELT agreed to the following:</li> </ul>	НМ
<ul> <li>HM to look into Item 2 (Uniforms). CE advised that he is happy to discuss with HM if required.</li> </ul>	
JP to check / follow-up on Item 5 (spraying on high dam walls).	JP
representatives.	CE
<ul> <li>It was requested that the WHS Consultative Committee Minutes be provided to the ELT following each meeting.</li> </ul>	CE
Item 11 – Sponsorship Program Funding Update	
<ul> <li>The ELT noted the Seqwater Sponsorship Program overspend for 2009-10, and that the shortfall will be covered within the existing overall Communication budget.</li> </ul>	
It was requested that this be noted in the CEO's Report.	CE
Item 12 – General Business	
<ul> <li>Workplace Accreditation Certificate for Rehabilitation — CE advised that Seqwater now has this Accreditation to 2013.</li> </ul>	
<ul> <li><u>Streamline Team Improvement Plan Process</u> – CE provided a status paper, dated 25 May 2010. CE was requested to arrange for a communication to staff regarding the status of the Streamline Team Improvement Plan Profess, including any slippages in time targets, and the</li> </ul>	CE
<ul> <li>relevant reasoning (positive explanations) regarding the slippages.</li> <li>Annualised Salaries Issue – CE advised that a Directions Hearing is set for 10am on 11 June 2010.</li> </ul>	
<ul> <li>2010 Public Sector Conference – CE advised that IPAA runs this Conference annually; that he has given consideration to the conference content, and advised the ELT members that staff attendance is not recommended.</li> </ul>	

RESPONSIBLE FOR ACTION

#### Item 12 Continued

QAO Report to Parliament No. 5 for 2010 — Performance Reviews — Using Performance Information to Improve Service Delivery — HM cited this document, and advised that the Auditor-General's mandate has increased beyond financials — is essentially continuous improvement. HM recommended that ELT members need to be considering this when considering business proposals.

**ALL** 

• <u>Sustainability & Governance – Transition Plan</u> – HM tabled a paper; advised that this will involve flow-on impacts; and requested that the ELT members review this and provide feedback to HM. HM advised that she will discuss this with BA on his return from leave.

Item 13 - Weekly Risk Update

 Workplace Health and Safety – specifically, MSDS's, fire evacuation, and planning audits. (It was noted that this may affect HM's Board Paper and ERR mitigation / treatments.) нм

The meeting closed at 11.44am.



ITEM 3

### **AGENDA ITEM SUBMISSION**

Queensland Bulk Water Supply Authority, trading as Sequater Weekly Management Meeting

Meeting Focus: (Please tick)	WEEK 2 OF THE MONTH − STRATEGIC & OPERATIONAL  WEEK 3 OF THE MONTH − OPERATIONAL  VEEK 4 OF THE MONTH - STRATEGIC / BOARD MATTERS			
	NB: WEEK 1 IS FOR LEADERSHIP TEAM MEETINGS			
Item Category: (Please tick)	Strategic Operational			
Consultation has taken place: (Please tick)	YES √ NO			
Indication of Time Required:	5 minutes			
Meeting Date:	17 February 2010			
Item Number:	3			
Item Title:	SEQ Water Grid Scenario Exercise			
Submitted by:	Jeff Lyddon and Terry Carter			
In attendance for this item will be:	Jeff Lyddon and Terry Carter			
Outcome/s Requested:	To advise EMT of the SEQ Water Grid Scenario Exercise and the preparedness Seqwater staff will undertake throughout February 2010.			
Supporting Information / Papers:	EMT Briefing Paper			
Recommendation/s:	To endorse the preparedness approach towards the SEQ Water Grid Scenario Exercise.			



EMT Meeting Date: 17 February 2010

Prepared By:

Jeff Lyddon, Risk Advisor

Terry Carter, Principal Coordinator, Incident and Emergency

Management

Presented By:

Jeff Lyddon, Risk Advisor

Terry Carter, Principal Coordinator, Incident and Emergency

Management

**Attachments:** 

Scenario Exercise Handouts (SEQ Water Grid Manager)

#### RECOMMENDATION

#### That EMT note the following:

- 1. The SEQ Water Grid Scenario Exercise
- 2. Scenario Exercise Preparedness

#### **BACKGROUND**

The South East Queensland (SEQ) Water Grid Manager initiated a program of work to establish a grid wide Emergency Response Plan in 2009. Through consultation with supply chain partners, an Interim Emergency Response Plan was developed in December 2009. The purpose of this plan is to ensure an effective and coordinated grid-wide response exists for the supply chain.

In conjunction with the development of the Interim Emergency Response Plan, Seqwater has proactively developed its own Incident and Emergency Response Plan to ensure alignment and consistency with the SEQ Water Grid.

There is now a requirement for the SEQ Water Grid Interim Emergency Response Plan to be tested. This will be achieved through a scenario exercise which will occur on 2 and 3 March 2010 involving all supply chain partners. To facilitate this process, the SEQ Water Grid Manager has engaged MC2 Pacific. They will be responsible for developing and coordinating the scenario exercise with the assistance of supply chain partners including Department of the Premier, Department of Infrastructure and Planning, Queensland Water Commission, Queensland Police, Department of Emergency Services, Minister for Environment and Resource Management, Queensland Health, DERM, QUU, Logan and Gold Coast City Councils.

Throughout the exercise, reference will be made to "ex-matrix" or "exercise matrix" in all communications. Should a real life scenario present itself during the exercise, Seqwater can halt the scenario by notifying the SEQ Water Grid Manager.

Attached for your information is the exercise handout provided by the Water Grid Manager.

The desired outcome for this exercise is to determine the effectiveness of the whole grid response to an emergency through coordination by the SEQ Water Grid Manager. Seqwater's incident and emergency response procedures will be used and tested in conjunction with this exercise.

There is a range of activities to be conducted leading up to the exercise. Further updates will be provided to relevant staff to ensure an understanding of roles, responsibilities and expectations throughout this scenario.



EMT Meeting Date: 17 February 2010

#### **TIMEFRAMES**

#### Scenario Exercise Preparedness

DATE	TASKS	RESPONSIBILITY
Feb 1	<ul> <li>Prepare briefing papers: Steering Group review</li> <li>Complete media/technology preparations:</li> <li>Exercise facilitating staff briefing/instructions</li> </ul>	SEQ Water Grid Manager
Feb 19	<ul> <li>Information relating to exercise scenario distributed to relevant Segwater staff</li> </ul>	Terry Carter Jeff Lyddon
Feb 19	Gather relevant information for use during scenario. For example:	Terry Carter Jeff Lyddon
Feb 23 / 24	<ul> <li>Brief role-players</li> <li>Brief individual participant organisations</li> <li>Finalise contact directory and observers/assessment guides</li> </ul>	SEQ Water Grid Manager
Feb 26	<ul> <li>Overview of Seqwater Incident and Emergency Response Plan to relevant staff including scenarios</li> </ul>	Terry Carter Jeff Lyddon
Feb 26	<ul> <li>Communication script distributed amongst participants</li> </ul>	Terry Carter Jeff Lyddon
Feb 26	<ul> <li>Incident and Emergency Management Control Room established</li> </ul>	Terry Carter
Mar 1	Preparedness meeting for Seqwater participants	Terry Carter Jeff Lyddon
Mar 2/3	EXERCISE	ALL GRID PARTICIPANTS
Mar 4	Seqwater debrief	All Seqwater participants
Mar 8	Debrief Report	SEQ Water Grid Manager
Mar 8	Distribute Debrief Report to Seqwater participants	Terry Carter
	Combined debrief meeting / report	SEQ Water Grid Manager

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D. Gregory Document Approver: Executive Management Team



EMT Meeting Date: 17 February 2010

#### **SEQWATER PARTICIPANTS**

Name	Position	Role required	
Peter Borrows	CEO	Oversight of incident response	
Jim Pruss	EGM (Water Services)	Liaison / coordination with water grid	
		manager during scenario exercise (Grid	
	·	Emergency management team)	
Stan Stevenson	Coastal Operations Manager	Seqwater Incident coordinator	
Brett Myatt	Central Operations Manager	Seqwater Incident coordinator	
Arran Canning	Water Quality Product Manager	Seqwater Incident coordinator	
Rob Townsley	Water Quality Process Specialist	Technical Support Incident Management Team	
Mike Foster	Public Affairs and Media Manager	Media liaison Incident Management Team	
John Tibaldi	Principal Engineer Dam Safety	Flood Management, Incident	
		Management Team	
Arun Pratap	Corporate and Stakeholder Relations  Manager	SEQ Water Grid Manager Liaison Support	
Jessica Stork Administration Officers (Reception)		Respond to media and public enquiry as	
Shelley Pool		per incident emergency and response plan	
Jo Hollingsworth	Administration Officer	Assistant to Seqwater Incident	
T	Disciplination (Constitution)	Coordinators	
Terry Carter	Principal Incident Coordinator	Initial declaration of incident as per	
		Seqwater's incident and emergency response plan.	
		response plan.	
		Observer at SEQ Water grid manager's	
		office	
Jeff Lyddon	Risk Advisor	Observer at Segwater	
Mel McGaw	WH&S Manager	WH&S support, Incident Management	
,		Team	
Bill Andrew	EGMs	Noting	
Helen Moore			
Alex Fisher			
	Staff as required	Incident Management Team	

#### **ISSUES**

There are no significant issues.

#### LINKAGE TO SUSTAINABILITY CHARTER, STRATEGIC AND OPERATIONAL PLANS

This activity is consistent with performance objectives relating to risk contained in the Seqwater Operating Plan

#### **RISK IMPLICATIONS**

Enterprise Risk (%) Category	Risk Statement	This Paper – Risk Mitigation
4.0 SECURITY	Inability to effectively respond to significant events adversely impacts on our ability to achieve our regulatory and community expectations	SEQ Water Emergency Response Plan Scenario Exercise

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Document Number: Document Owner:

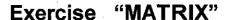
D. Gregory

Document Approver: Executive Management Team



EMT Meeting Date: 17 February 2010

**FINANCIAL IMPLICATIONS** As this is a desktop exercise, there are no significant costs associated with this activity. **Executive General Manager** Helen Moore Date:







An emergency simulation for the SEQ Water Grid and associated stakeholders

# **Pre-Exercise Handouts**

These contents are intended for all Participants, Observers, and Role-Players. This document is to be distributed in advance of the exercise and includes:

- 1 Introduction, Objectives, Participants, and Event format
- 2 Exercise Ground Rules
- 3. Scenario background information

### 1. Introduction, Objectives, Participants, and Format

#### Introduction

Exercise "MATRIX" is being held at the instigation of Water Grid Manager (WGM) over two days in early March on behalf of the SEQ Water Grid participants and stakeholders as part of the testing and verification of the new "Interim" SEQ Water Grid Emergency Response Plan. The exercise will be based on several concurrent emergencies potentially resulting in significant water supply, quality, and public health concerns, as well as injuries and asset damage. Subsequent incidents elsewhere in the SEQ Water Grid sphere of operations will combine to place demands on individual Grid Participants and the Water Grid as a whole.

The exercise will involve real-time responses by relevant Grid Participants to the emergency scenarios, which will unfold through the course of the exercise.

Prior to the event a number of training and briefing sessions will have been run for Grid Participants, and further detailed briefings about this exercise process, arrangements, and expectations will be conducted, in the weeks leading up to the event.

Participants will be expected to manage the scenario events in real time, liaising closely with other participants and stakeholders, and utilising all existing internal plans and communications arrangements as would be used in a real emergency, with specific reference to the:

- (interim) SEQ Water Grid Emergency Response Plan (Interim ERP)
- Incident plans of individual participants affected
- Emergency plans of related entities and agencies

Role-players (volunteer staff) will be utilised to provide all other input and feedback as would normally be expected from other parts of the grid and external stakeholders, including media representatives.

Communications during the event will utilise an Exercise Contact Register to be issued prior to the event, listing all the participants and role-played entities who may be contacted. It is <a href="mailto:essential">essential</a> that all communications are <a href="mailto:strictly">strictly</a> limited to the defined participants and the role-played agencies or individuals listed. <a href="mailto:There should be no actual involvement of, or communications with any agency or person outside these parameters.">There should be no actual involvement of, or communications with any agency or person outside these parameters.</a>

Similarly, this exercise will <u>not</u> require the mobilisation of any physical internal or external emergency response equipment or resources, including field crews and contact centres.

#### **Exercise objectives**

The objectives of **Exercise "MATRIX"** have been derived from our briefing with the Department of Environment and Resource Management, with further granular detail provided by the Water Grid Manager. In this exercise, the major objective is to familiarise, practise and verify the Interim ERP and Grid Participants understanding of the Interim ERP, related plans and procedures. Specific aims of the event involve practise and testing of:

- The processes for incident notification and assessment
- Escalation criteria and decision-making
- Coordination of overall response strategies and communications with Grid Participants, key stakeholders, and customers / general public
- Obtaining expert technical advice, and additional support resources if required

SEQ Water Grid Exercise "MATRIX"

 Managing prolonged, complex, but realistic, multi-incident situations which may require additional resources and shift change-overs

 Managing the media, including enquiries, interviews / media conference, and use of the media in disseminating public information

The exercise is specifically designed not only to test these objectives but also to provide a constructive learning environment for all participants. It is <u>not</u> designed to test or highlight individual performance. It is not intended to put undue strain on any individual or function, but rather to ensure that the overall process can be effectively deployed.

A key outcome will be the identification of any gaps in the documentation, specifically the Interim ERP, or essential skills, and agreement of potential solutions, to ensure compliance with the requirements of the 'Market Rules'.

#### **Exercise participants**

The parties which will actively participate in the Exercise include:

- SEQ Water Grid Manager emergency management, coordination, and support staff
- Grid Participants' own incident / emergency management teams, and their senior management secondees into the Grid EMT, including:
  - Segwater
  - LinkWater
  - Brisbane City Council
- DERM / regulator + Minister's Office
- Queensland Health + Minister's Office (If required by Qld Health)
- Watersecure
- Qld Treasury + Minister's Office (If required by Qld Treasury)
- Qld Police Service and EMQ as observers (or role-play capacities if required).

#### **Event format**

The exercise will be a real-time multi-participant / multi-site event, involving live management (but not physical) response to a series of escalating incidents, including actual communication between participating parties and with other role-played entities. Key elements of the process will include:

- Real time notification of the incidents to the affected parties, necessitating assessment of severity, reporting, and escalation as appropriate, in line with the interim ERP
- Activation of the relevant emergency teams at the Participants' control rooms, including:
  - o Affected asset owners
  - Grid EMT and Coordination group
  - Inter-agency operations team (if required by the EMT)
  - Representatives from other agencies and stakeholders (eg DERM, QH, EMQ)
- Operation of the teams to plan, document, and communicate response strategies and actions

SEQ Water Grid Exercise "MATRIX"

• Live communications in person, or by phone, fax, or email (see Exercise Rules below), between all participating parties and with role-played entities, and actual development of any key messages, briefing papers, and statements / releases

 (role-played) media involvement including TV / Radio News interviews, and potentially a full press conference

The event will run until 5pm on day one, and will recommence the following morning, with an update of events occurring overnight, then run throughout most of day two. Participants may choose to use this break to stand down the initial response team, and restart with a second group, to simulate shift change-over.

The event will be followed immediately after final stand down, by an assessment process and hot debrief at each main participating site. This will provide initial feedback but also collate the views of all participants, observers, role-players, and exercise facilitators (positioned with each main group), for input to the full debrief report.

A combined debrief meeting will be organised at a later date, to review the findings of the report and agree key actions required.

(Broad sequence of events to come, once scenario details finalised)

SEQ Water Grid Exercise "MATRIX"

#### 2. Exercise Ground Rules

In order to ensure the smooth running of the exercise, please read these briefing notes carefully. Have them available during the exercise, observe them throughout the exercise, and ensure they are also followed by any additional resources brought in to assist. The following rules *must* be observed during the exercise:

- The <u>only</u> contact numbers, which may be used during the exercise, are those listed in the Exercise Contact Register. <u>Under no circumstances</u> should any other person or organisation be contacted without reference to the Exercise Director.
- All verbal communications between exercise participants and role-players must begin and end with the phrase "Exercise MATRIX".
- Apart from the information given in scenario description and information sheets, the exercise will be run in real time but may be more condensed than in a real emergency. Internal conditions (staffing levels etc) will be as currently exist at the time of the exercise. Note that external conditions, such as weather information, operating circumstances, etc. will be as given by the exercise documentation and may NOT be as exists in real life.
- It is not intended to involve any switchboards or call centres directly. Rather, it will be assumed that operators have been involved in or notified of the Emergency Teams' activation (but not yet individual member phone extensions) and are forwarding incoming calls to the control rooms.
- Situation developments will be advised by a number of means including, Incident Information sheets, Role-Players' calls, and liaison with other participating groups. Responses should be in accordance with existing procedures, which would be used in a real emergency. **DO NOT** make up your own assumptions and outcomes.
- The event will be initiated by a telephone call reporting a serious incident to the appropriate manager, and ultimately providing sufficient details to warrant activation of the Interim ERP. Emergency team(s) members will then be contacted and instructed to convene in the selected control rooms for briefing and commencement of the operation.
- Communications between participants and with role-payers will be in person or by phone, fax, or email. .All written communications should use the forms specified in the Interim ERP, but with a clear watermark ("Exercise MATRIX only") to be provided.
- Participants should retain any logs, notes, and communiqués from the exercise. If not collected after the exercise, please forward them to the Exercise Director, as they will be used during the debrief and to compile the exercise report.

#### **Real Emergency**

Should a real emergency occur during this exercise, the exercise would be terminated by a call from the Water Grid Manager to participants using the exercise name, followed by the code words "SAFEGUARD SAFEGUARD" and giving the reason for the termination.

#### **Exercise Clock**

This exercise will be run in real but condensed time (i.e. the time on the clock can be assumed to be the "exercise time"), and all exercise times will be given in Australian Eastern Standard Time, based on a 24-hour clock.

### 3. Scenario Background

To be devised and issued in advance to exercise participants, once the full scenario has been developed.

FURTHER DETAILS AND DEVELOPMENTS WILL BE ISSUED TO EXERCISE PARTICIPANTS SHORTLY PRIOR TO THE EVENT STARTING



ITEM 2

### **AGENDA ITEM SUBMISSION**

Queensland Bulk Water Supply Authority, trading as Sequater Weekly Management Meeting

Meeting Focus: (Please tick)	WEEK 2 OF THE MONTH - STRATEGIC & OPERATIONAL OPERATIONAL  WEEK 3 OF THE MONTH - OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL			
	NB: WEEK 1 IS FOR LEADERSHIP TEAM MEETINGS			
item Category: (Please tick)	Strategic Operational Operational Operational - Decision Operational - For Info			
Consultation has taken place: (Please tick)	YES V NO			
Indication of Time Required:	10 Minutes			
Meeting Date:	26 May 2010			
Item Number:	2			
Item Title:	Corporate Risk Management Procedure			
Submitted by:	Jeff Lyddon, Risk Consultant			
In attendance for this item will be:	Helen Moore, EGM-BS			
Outcome/s Requested:	Risk Management Procedure to be approved by ELT			
Supporting Information / Papers:	<ol> <li>Briefing Paper</li> <li>Corporate Risk Management Procedure</li> <li>Risk Consequence Table</li> <li>Risk Likelihood Table</li> <li>Risk Register Template</li> </ol>			
Recommendation/s:	Seeking endorsement of the Risk Management Procedure from ELT			



### CORPORATE RISK MANAGEMENT PROCEDURE

Meeting Date: 26 May 2010

Prepared By:

Jeff Lyddon, A/Principal Risk Advisor

Presented By:

Helen Moore, EGM - Business Services

Attachments:

Corporate Risk Management Procedure

#### RECOMMENDATION

#### That ELT endorse the following:

#### 1. Corporate Risk Management Procedure

#### **BACKGROUND**

There has been some focus over the last 6 months on establishing risk management processes across the organisation. This has resulted in the development of an Enterprise Risk Register and associated Board reporting incorporating Enterprise and Priority Risks on a quarterly and monthly basis respectively.

Seqwater's Risk Policy was amended and approved in February 2010 by the Board to reflect the following changes:

- AS/NZ 4360:2004 Risk Management has been superseded by the ISO 31000 Risk Management Principles and Guidelines.
- Reference to performance management process in the existing Risk Policy was removed because
  it is no longer relevant with the introduction of the new enterprise bargaining arrangements.

Further work has been undertaken to develop reporting and monitoring tools, including standardised risk registers, risk reports and risk reporting protocols for use across the organisation. Existing risk management functions throughout the organisation will be aligned with the enterprise-wide risk management framework. The establishment of risk management capability has commenced within each Group.

Extensive consultation has occurred and will result in a consolidated approach to our risk management procedure. This will ensure that risk assessments are being carried out in a consistent manner. Currently, the proposed procedure is being used for the purpose of risk assessments for enterprise risks, WH&S, asset maintenance, compliance, environment, ICT, project and procurement. Other areas to be aligned include catchment, dam infrastructure, site and ADWG.

This process will also support the integrated management system currently being developed.

#### **APPROVAL**

The purpose of this paper is to seek endorsement of this procedure by the Executive Leadership Team.



# **CORPORATE RISK MANAGEMENT PROCEDURE**

Meeting Date: 26 May 2010

#### Issues

It should be noted that ADWG risk assessments have already been completed across a range of sites. It is anticipated that when these plans are reviewed, alignment to the existing risk management procedure will be considered.

#### LINKAGE TO SUSTAINABILITY CHARTER, STRATEGIC AND OPERATIONAL PLANS

This activity is consistent with performance objectives relating to risk contained in the Operating Plan.

#### **RISK IMPLICATIONS**

Enterprise Risk Category	Risk Statement	This Paper – Risk Mitigation
Governance	Lack of governance framework results in ineffective controls and decision making.	External reviews have identified shortfalls in our governance framework which are currently being addressed.

#### FINANCIAL IMPLICATIONS

Consulting and advisory resources are assisting with the development and implementation of risk management processes. These costs will be included in future budget revisions and are offset against savings in staff costs against budget.

Executive General Manager				
	Helen Moore			
	•			
Date:				



#### Introduction

The Queensland Bulk Water Supply Authority, trading as Seqwater is responsible for managing bulk water supply and water treatment assets throughout South East Queensland.

The ISO/AS/NZS 31000 Risk Management – Principles and Guidelines and ISO/AS/NZS 31010 – Risk Assessment Techniques have been used as the basis for risk management within our organisation.

Risk is defined as an event that may have an impact on the achievement of Seqwater objectives. Risk is the uncertainty of the outcome of actions and events, whether a positive opportunity or a negative threat. Risk Management involves identifying and assessing risks and then responding to them appropriately.

#### **Purpose**

The purpose of this procedure is to document a systematic process to establish the context and to identify, assess, evaluate and treat risks across Seqwater. This includes reporting, roles, responsibilities and monitoring and review.

#### Scope

This procedure is applicable to all sites and activities over which Seqwater has control or influence. It provides for the identification, assessment and evaluation of the following risk categories:

- People
- Safety
- Water (Quality and Quantity)
- Assets
- Security (Physical and Natural Events)
- Governance
- Reputation
- Public Safety

#### **Objectives**

The objectives of this procedure are to support us in achieving:

- A strategic and organisational approach to manage risks for Segwater activities
- Effective strategic (enterprise) and operational planning with established linkages that provide confidence in achieving such objectives
- Organisational resilience to proactively respond to unplanned situations
- Effective recognition and action for continual improvement
- A risk awareness culture through communication of the risk management process
- Effective recognition of opportunities



# Risk Management Process

The Seqwater Risk Management procedure is based on the application of ISO 31000 and ISO 31010. Seqwater conducts ongoing communication and consultation with all involved parties to ensure understanding of the process and its intended outcomes. The key steps in the process are briefly described as follows:

Ste	p	Description			
0	Establish the context	Establish the external, internal and risk management context in which the rest of the process will take place. Criteria against which risk will be evaluated should be established and the structure of the analysis defined.			
. 2	Identify risks		, when, why and how events could prevent, degrade, nce the achievement of the objectives.		
•	Analyse risks	Identify and evaluate existing controls. Determine consequences and likelihood, and hence the level of risk. This analysis should consider the range of potential consequences and how these could occur.			
•	Evaluate risks	Compare estimated levels of risk against the pre-established criteria and consider the balance between potential benefits and adverse outcomes. This enables decisions to be made about the extent and nature of treatments required and about priorities.  Escalate risks with Seqwater-wide impacts or unacceptable risk ratings to the Executive Leadership Team.  Escalate risks with Grid-wide impacts or unacceptable risk ratings to the Water Grid Manager.			
<b>(</b> )	Treat risks	Develop and implement specific cost-effective strategies and action plans for increasing potential benefits and reducing potential costs.			
activities and consult stakeholders a			stakeholders as appropriate at each stage of the risk management process and concerning the process as a		
		Monitor and review	It is necessary to monitor the effectiveness of all steps of the risk management process. This is important for continuous improvement.  Risks and the effectiveness of treatment measures need to be monitored to ensure changing circumstances do not alter priorities.		



# 0

#### **Establish the context**

#### **SEQ Water Grid Context**

The purpose of the South East Queensland Water Grid (SEQ Water Grid) is 'Secure and Efficient Water Supply' for South East Queensland (SEQ). The strength of the SEQ Water Grid is the sum of its people, processes, systems and assets; not just the individual entities or assets. The assets and operations within the SEQ Water Grid have, via the institutional reforms, allocated common asset types and functional processes in the water supply chain to specific entities. This recognises the benefits of concentrating operational skills and experience within those entities and allows them to focus on the risks associated with their specific assets and functions. The Water Grid Risk Management Plan seeks to leverage off this inherent risk mitigation strategy.

As each entity is an integral part of a single supply chain, a particular focus of the Water Grid Risk Management Plan is on the handover points in this supply chain, and the risks that may cause a whole-of-grid impact.

We are working in close collaboration with the Grid Manager on the issue of risk management under the umbrella of the SEQ Water Grid Risk Resilience Framework. This will incorporate a risk management process, emergency response, business continuity and asset security planning.

#### **Segwater Context**

The risk management procedure is designed to ensure that all potential enterprise, operational and project levels are regularly identified, assessed, evaluated and treated to ensure that they are managed with appropriate risk mitigation strategies and reported to management, the Executive Leadership and the Board accordingly.

#### Enterprise (Strategic) Risk

These following categories have been incorporated into the Enterprise Risk Register and will be used as the basis for our enterprise risks:

- People
- Water (Quality and Quantity)
- Assets
- Security (Physical and Natural Disaster)
- Governance (including financial, compliance and fraud)
- Reputation
- Business Continuity
- Emergency and Incident Response
- Public Safety



- · Organisation structure and culture
- Geographics/demographics
- The identity and nature of interaction with key stakeholders
- Operational plan objectives

For each of the areas identified above, there will be legal and regulatory requirements applicable to us. These are identified and taken into account in establishing, implementing and maintaining the risk registers triggered by this procedure.

We will undertake this approach across the enterprise, operational and site levels of the organisation through consistent process and tools. This approach also establishes the context of the risk specific to us. This context has been adopted and enhanced to cater for the needs of Seqwater and outlines the functions or type of risks that may impact on Segwater's objectives.

**Project Risks** relates to the risks which may impact on the attainment of project deliverables and is managed in accordance with our Project Management Methodologies. These risks are specific to each project and therefore may be unique between projects. However, the risk management procedure supports the management of these risks.

**Water Quality Risks** relates to the potential for poor water quality being produced which results in aesthetic or health related issues. In addition, regulatory requirements determine the thresholds we must satisfy to ensure quality water supply to our customers.

As a result, details of risks undertaken against the Australian Water Drinking Guidelines (AWDG) are contained within each of our AWDG Management Plans.

Site Risks relate to those risks and opportunities that exist at an individual site.



# 2

# **Identify** risks

#### Aim

The aim of risk identification is to develop a comprehensive list of sources of risks and events that might have an impact on the achievement of objectives, as identified in **①** 'Establish the context'. Unidentified risks can pose a major threat to the organisation or result in significant opportunities being missed.

#### **Risk Identification Techniques**

Possible approaches to identifying risks include the following:

- Team-based brainstorming via facilitated workshops
- Structured techniques such as flowcharting, system design review, systems analysis
- Hazard and Operability (HAZOP) studies and operational modelling
- Scenario and 'what-if' analysis
- Recovering from incidents and emergencies

Ideally, a combination of approaches should be used to maximise risk capture

#### **Understanding Our Risks**

In addressing the risk areas identified in '**©**Establish the context', the following questions are a guide for examining risks and their components.

- What is the source of the risk?
- What might happen that could:
  - Increase or decrease the effective achievement of objectives
  - Make the achievement of the objectives more or less efficient (financial, people, time)
  - Cause stakeholders to take action that may influence the achievement of objectives
  - Produce additional benefits
- What would be the effect on objectives?
- When, where, why and how are these risks likely to occur?
- Who might be involved or impacted?
- What controls presently exist to treat this risk?
- What could cause the control not to have the desired effect on the risk?



#### Information Sources

The following are useful sources of information for both suggesting risks that need to be addressed, and for providing detail on the nature of risks and appropriate treatments:

- Local and overseas experience
- Expert judgement
- Focus group discussions
- Personal experience or past organisational experience
- Surveys and questionnaires
- Management and Board minutes
- Management interviews and workshops
- Results and reports from audits, inspections and site visits
- Checklists
- Historical records, incident databases and analysis of failures and previous Risk Registers if they exist
- Insurance claim reports
- Incident debriefings and Post-Incident Reports
- Annual reports





### Analyse risks

#### Aim

The aim of risk analysis is to provide a simple indicative rating of the severity of a risk, and by extension the urgency of treating it effectively. The process to be used across Seqwater to determine the severity of a risk will be to assess the current risk, that is, the risk in view of the controls that are already in place.

#### **Calculating Risk Level**

Risk is simply expressed as a function of its consequences and likelihood.

Risk = Consequence X Likelihood

The process assigns semi-quantative values to consequence and likelihood levels, allowing them to be combined to give the risk rating.

#### Likelihood Table

**Attachment 1** describes the five likelihood levels against specific subject areas such as Environment, Workplace Health and Safety and Water Quality. There is also a generic scale which can be used.

The likelihood has three different criteria to use including description, frequency (time) and probability. Any of these can be used when determining the likelihood against the subject area.

#### Consequence Table

**Attachment 2** provides a general description of the five consequence levels with a description for each level of consequence.

Similar to the likelihood table, the consequence table provides criteria against each subject area. By following the level and the subject area, you can determine the rating.

#### Risk Rating

Combine the risk consequence and likelihood using the table to determine the risk rating. For example, a moderate consequence and a likelihood of possible results in a rating of High.



Risk rating matrix

		Likelihood				
		Rare	Unlikely	Possible	Likely	Almost certain
	Catastrophic	Medium	High	High	Extreme	Extreme
	Мајог	Medium	Medium	High	High	Extreme
	Moderate	Low	Medium	High	High	High
Consequence	Minor	Low	Low	Medium	Medium	High
Conse	Insignificant	Low	Low	Low	Medium	Medium

#### **Current Risk with Existing Controls**

To determine current risk, carry out the process to calculate risk level, taking into account the benefits of any controls and treatments currently in place for the risk. The result should be entered into the Risk Register, including detail of the current controls and their effectiveness.

#### Risk Register

The Risk Register outlines the foreseeable risks and provides for a set of actions to be taken to both prevent the risk from occurring and reduce the impact of the risk should it eventuate.

The Risk Register template as detailed in *Attachment 3* must be used by all staff. The risk register will be used for:

- Enterprise risks
- Operational risks:
  - o Group level
  - WH&S
  - o Environment
  - o Procurement
- Project risks



### 4 Evaluate risks

### **Aim**

The aim of risk evaluation is to make decisions, based on the outcomes of the risk analysis, about which risks require treatment and to determine treatment priorities.

We follow the 'As Low as Reasonably Practical' (ALARP) model for risk tolerance and prioritisation of treatment, which balances the cost vs. benefit achieved by mitigation treatments.

### **Escalation and Notification – Sequater**

Risk rating	Response
Extreme	<ul> <li>Urgent treatment essential—prioritise as per risk rating numerical value</li> <li>Notify relevant Executive General Manager who will notify CEO</li> <li>Notify Principal Risk Advisor</li> <li>Notify Water Grid Manager if likely to apply to more than one Grid Participant</li> </ul>
High	<ul> <li>Urgent treatment required—prioritise as per risk rating</li> <li>Notify Water Grid Manager if likely to apply to more than one Grid Participant</li> </ul>
Medium	Treatment required—prioritise as per risk rating
Low	<ul> <li>No treatment required—risk managed within normal operations</li> <li>or</li> <li>Minor treatment desirable—prioritise as per risk rating numerical value</li> </ul>

Where risk rating scores are equal, the higher priority will always be allocated to the risk that will cause death or injury.

### **Escalation and Notification – SEQ Water Grid Manager**

There are two types of risk that must be notified to the Water Grid Manager's Risk Manager:

Type of risk	Role
'Extreme' risk rating for current risk that impacts an individual Grid Participant (Seqwater)	<ul> <li>Monitor and review progress and effectiveness of mitigation treatment</li> <li>Assist as appropriate</li> </ul>
'High' or 'extreme' risk that (potentially) impacts whole- of-Grid (Water Grid Manager)	<ul> <li>Add risk to whole-of-Grid Risk Register</li> <li>Develop and implement whole-of-Grid mitigation treatment</li> <li>Notify risk to other (potentially) impacted Grid Participants for inclusion in their own Risk Registers</li> </ul>



### Treat Risks

### Aim

Risk treatment involves:

- Identifying the range of options for treating risks
- Assessing those options
- Seeking budget approval (where necessary)
- Preparing Risk Action Plans and implementing them

### **Assignment and Review Requirements**

In accordance with the SEQ Water Grid Risk Management Plan (Risk Resilience) Framework and the Seqwater Risk Management System, the following requirements apply to all risk treatments:

- Short-term risk controls are to be clearly assigned to responsible entities or Grid Participants.
- Longer term preventative controls involving investment and capital expenditure are to be formally risk assessed and provided to the Executive Leadership Team for comment on the Seqwater implications.
- Handover responsibilities and the risks associated at handover and critical control points
  are to be jointly assessed by the interested parties and assigned to a responsible party
  for control. Operating protocols are to outline the responsible party, and each party is to
  articulate these responsibilities in their risk management plan. The Water Grid Manager
  is to ratify the operating protocol prior to sign-off by the Rules Administrator.
- Major capital investment and preventative maintenance approvals are to be risk assessed for whole-of-Grid impact.
- Whole-of-Seqwater risks are to be reviewed and responsibility assigned by the Executive Leadership Team.
- The SEQ Water Grid has established a Risk Officers' Committee (ROC) to review gridwide risks and responsibility assigned to the CEO Working Party.

### **Treatment Options**

Treatment options include:

- Avoidance by:
  - o not proceeding with an activity that entails risk
  - o removing the aspect of the activity that is the source of risk
  - o finding another way to achieve the same outcome
- Transferring some or all of the risk—normally done by contracting out the activity or through insurance
- Reducing either the likelihood or consequence of an adverse event (as result of a successful risk action plan)
- Acceptance or retention of the risk, either with or without risk financing

The appropriate option should be chosen based on feasibility, cost-benefit analysis and the type of risk consequence.



### Treatment Hierarchy

In accordance with the Seqwater Risk Management System, the following hierarchy of controls is to be implemented for health, safety, environmental and community risks:

- Eliminate hazard source—this is the best option if practical
- Substitute the hazard source with one less hazardous
- Engineering control—redesign, erect physical barriers, enclose, isolate
- System controls—Safe Work Procedures, Work Permits, warning devices and training
- Use personal protective equipment—placing a last line barrier between the person and the hazard

Amerikanes	Do not proceed with the activity or choose an alternative approach to achieve the same outcome.
	Reduce the likelihood - improving management controls and procedures.
Mitigate	Reduce the consequence - putting in place strategies to minimise adverse consequences, e.g. contingency planning, Business Continuity Plan, liability cover in contracts.
Transfer the risk	Shifting responsibility for a risk to another party by contract or insurance. Can be transferred as a whole or shared.
	Controls are deemed appropriate. These must be monitored and contingency plans developed where appropriate.

### **Risk Action Plans**

A Risk Action Plan is to be developed for each risk identified at **6** 'Evaluate risks' as requiring treatment.

Plans should include the following basic elements:

- Scope
- Responsibilities
- Cost
- Time
- Resources
- Expected outcomes
- Treatment option implementation approach, including some or all of:
  - People controls
  - Process controls
  - Systems controls
  - Assets controls
- Performance evaluation



### **Review Triggers**

Risk Action Plans are to be reviewed at least quarterly or when one of the following occurs:

- Whenever there has been a change in the threat or strategic context (e.g. impending natural disaster, raised alert level for terrorism threat)
- Whenever enhancements have been identified during the normal course of business
- Whenever new equipment or assets affecting the risk are brought into the Water Grid
- As a part of the organisational strategic planning process
- Following an incident/issue, to incorporate any lessons learnt
- Whenever any lessons have been learnt from other sources (i.e. mock emergencies or internal training exercises)

### **Expected Outcomes—Calculate Targeted Risk Level**

To determine whether the treatment chosen is sufficient to reduce a risk to an acceptable rating, recalculate the risk level following the process outlined in '⑤ Analyse risks', taking the benefits of the planned treatment into account when gauging the consequences and likelihood. The resultant risk rating should be recorded in the Risk Register as the 'targeted risk rating'.

Once the result is know, further consideration is given to respond to the risk rating which may include further mitigation strategies to be undertaken. Where the risk rating is Medium or Low, whether a risk remains is determined on the strength of the existing operational controls and monitoring processes.



### **6** Continuous Activities

The following areas of activity should occur continuously throughout our risk management system:

- Communicate and consult
- Monitor and review

### **Communicate and Consult**

### Aim

The aim of appropriate communication and consultation is to:

- Improve people's understanding of risks and the risk management process
- Ensure that the varied views of stakeholders are considered
- Ensure that all participants are aware of their roles and responsibilities

### Stakeholder identification

Stakeholders with whom it may be appropriate to communicate and consult include:

- Core relevant stakeholders:
  - Seqwater Board
  - Seqwater Executive General Managers
  - o Segwater Principal Risk Advisor
  - o Water Grid Manager
  - Water Grid Manager Risk Manager
  - Risk Officer Committee
  - Water Grid CEO Group
- Other internal and external stakeholders:
  - Relevant Board/s
  - Responsible Minister/s and other local members whose electorates may be affected by activities or associated employment or other opportunities
  - Senior executives and managers of business units who may be affected by the organisational activities
  - Staff, their families, unions and other representative organisations
  - The media
  - Legislators and regulators
  - People who may be affected by the organisation or its activities
  - The environment and the community, as general proxy stakeholders
  - Special interest groups, such as environmental lobby groups
  - o Contractors and suppliers
  - o Emergency services organisations
  - Financial institutions and other providers of private sector funding



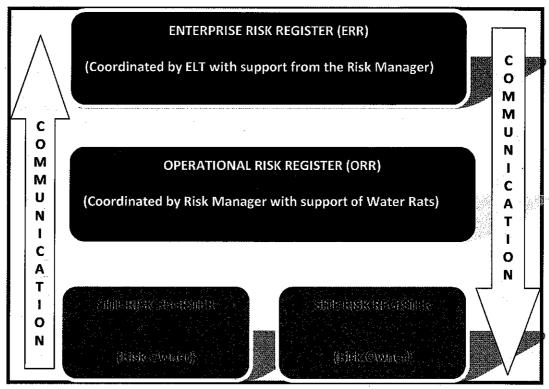
### **Monitor and Review**

### Aim

The aim of monitoring and review across the risk management process are to ensure:

- Progress is made against Risk Action Plans
- Risk Action Plans achieve the required risk reduction
- Risk assessments and risk ratings remain valid given changes in circumstances
- The risk management process continues to be appropriate

Seqwater will monitor the currency and effectiveness of the risk management processes. The following diagram illustrates the communication flow up and down the organisation with reference to Risk Registers



Risks are reported through the following mechanisms:

- Board Reporting
  - On a monthly basis, the priority risks are provided to the Board outling risks which may impact us in the short to medium term
  - o On a quarterly basis, variations of Enterprise risks are provided to the Board
  - o On an annual basis, the Board reviews the Enterprise Risk Register
- Risk Assessment Team (Water Rats)
  - On a monthly basis the Risk Assessment Team develops initiatives to improve the risk culture of Seqwater
- Executive Leadership Team:
  - A quarterly (or more frequently when directed) report to include:
    - Emerging risks
    - Update on Enterprise and Operational Risk Register(s)



### Verification

Compliance with this procedure may be verified by management reviews and internal audit.

### Referenced Information

The following are the principal references for the preparation of this procedure.

- Seqwater Risk Management Policy
- Seqwater Corporate Management System Manual
- Segwater Environmental Risk Assessment
- POL 00013: Risk Management Policy
- REG 0052: Enterprise Risk Register
- REG 008: Corporate Environmental Risk Assessment and Register
- TEMP 0002: WH&S Safety Risk Register Safety Plan Template
- Water Act 2000 (Qld)
- Workplace Health and Safety Act 1995 (Qld)
- Environmental Protection Act 1994
- ISO 31010:2009: Risk Assessment
- HB205:2004: OHS Risk Assessment Handbook
- HB203:2006: Environmental Risk
- Australian Drinking Water Guidelines 6 Section 3.2.3 regarding Hazard Identification and Risk Assessment
- Queensland State of the Environment Report 2007 for the principal environmental indicator headings
- ISO9001:2000: Quality Management System requirements Section 7 in relation to product realisation planning
- ISO14001:2004 Environmental Management System requirements Section 4.3.1 (Environmental Aspects) and 4.3.2 (Legal and Other Requirements)
- AS4801:2001: OHS Management System Requirements Sections 4.3.1 (Identification of Hazards) and 4.3.2 (Legal and Other Requirements)
- ISO22000:2005: Food Safety Management Systems Section 7 (Planning and Realisation of Safe Products)
- Queensland Water Grid Manager Emergency Plan for categories and description of consequences
- Global Reporting Initiative for Risk categories consistent with a sustainability agenda
- Risk Management Policy and procedures (Final v2\_2109729) prepared by KPMG for Segwater



### **Definitions**

For this procedure, the following definitions apply:

- Consequence: Outcome or impact of an event.
- **Control:** An existing process, policy, device, practice or other action that acts to minimise negative risk or enhance opportunities.
- Environmental Aspect: element of an organisation's activities or products or services that can interact with the environment. A significant environmental aspect has or can have a significant environmental impact.
- **Environmental Impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
- HACCP: Hazard Analysis and Critical Control Point (ISO22000 requirements for a food safety management system in the food chain where an organisation needs to demonstrate its ability to control food safety hazards in order to ensure safe products).
- **Hazard:** A source or a situation with a potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.
- Likelihood: Used as a general description of probability or frequency.
- Procedure: A specified way to carry out an activity or a process.
- Residual Risk: Risk remaining after implementation of risk treatment.
- **Risk:** The likelihood and consequence of defined eventualities. Risk can include governance, quality, safety, environmental, economic and social dimensions. Risk may have beneficial or adverse consequences.
- **Risk Assessment:** The overall process of estimating the magnitude of risk to aid in deciding what actions will be taken.
- Risk Assessment Team: A group of representatives of business areas who build risk awareness and risk consciousness within Seqwater through monitoring and improving risk management processes.
- Risk Fix: An action that results in improving control effectiveness and reducing risk.
- Risk Owner: An individual who has delegated area of responsibility in which risk impacts
  on the objectives of that area of responsibility.
- Risk Score: The level or rating assigned to a particular risk.
- Risk Score Matrix: A tool to determine the risk score based on likelihood and consequence factors.
- **Significance:** A Significant risk is one with a risk ranking at or above a level determined by Seqwater to be significant.
- **Sustainability:** The social, environmental, economic and governance dimensions of the entity's policies and actions that determine its viability as a sustainable organisation.
- **People Risk** relates to risks associated with our people. Examples include capacity, capability, culture, WH&S. Mitigations include attraction and retention strategies, cultural, learning and development, remuneration, reward and recognition.
- Assets Risk relates to our natural assets (catchments) and built assets (WTP, Dams etc...) and the potential impact they may have on water quantity and water quality. Examples include asset failure, environmental damage, Capex and asset maintenance risks.



- Water Quality Risk relates to the 2004 Australian Drinking Water Guidelines (ADWG) developed by the National Health and Medical Research Council (NHMRC) in collaboration with the Natural Resource Management Ministerial Council (NRMMC). The ADWG incorporates the "Framework for the Management of Drinking Water Quality" and provides the Australian community and the water supply industry with guidance on what constitutes good quality drinking water. The current version includes Chapter 8: Drinking Water Treatment Chemicals.
- Water Quantity Risk relates to the supply of water (quantity) for SEQ Water Grid assets (connected) and non-water grid assets (non-connected). Examples include loss of supply (drought) for smaller communities and potential asset failure for larger assets.
- Physical Security (Natural and Physical Events) relates to the physical security of our assets and our ability to respond to natural disasters. Current examples relate to failure to deliver water as a result of security threats, natural events and inability to recover from any disasters.
- Governance Risk relates to our effective decision making and incorporates audit, risk, compliance, commercial, financial, fraud. Examples include a lack of processes to provide assurances to our stakeholders.
- Reputation Risk relates to risks which may impact our reputation with our customers, stakeholders and/or industry. Any such risk can result in a lack of confidence in our abilities to deliver water.
- Public Safety Risk relates to events that may impact the public. Potential risks include public access to Seqwater sites for the purposes of recreation. Examples include water accidents (i.e. power boats) and drowning.
- Environmental Risk relates to entities operating in Queensland. The Queensland State of the Environment Report identifies and reports on the environmental issues relevant to the managing of the Queensland Environment. It identifies the environmental risks Seqwater will assess for relevance and significance.
- Workplace Health & Safety risk applies to the people working for or on its behalf, their
  well being and the well being of the community that utilises the organisational assets.
  Seqwater will identify and assess its potentially significant safety risks through a process
  of inspections and consultation. From this site information, a corporate and site safety risk
  profile is developed.
- Sustainability risk applies to an entity seeking to progress a sustainability agenda. Seqwater incorporates governance, economic, social and environmental considerations into its risk framework.
- **Grid-wide risk** applies to Seqwater's role in the South East Queensland Water Grid. There is a requirement to ensure water supply chain risks are managed. This requires contribution from each grid participant and is coordinated by the Water Grid Manager.

## Risk Consequence Table

						Customer service and pu
Геле	Economic	Business continuity	Legal and regulatory	Reputation	Catchment - Land Use	Environmental Performance
oinqorJss4sD—Z	Unplanned balance sheet effect (increase in debt) of >\$30M	>1 week outage Limited work arounds	Actions resulting from an impact on the public:  • the public bringing class action • major cost implications unable to be met by the organisation. • major breach of Grid Contract, regulatory or common law obligations that impacts on a region/suburb of the 5outh East Queensland community.	Sustained and widespread concerns expressed by public and/or all levels of Government leading to a loss of trust and confidence in participant/s impacting whole of water grid operations.	Widespread erosion and landslip event Non-existent vegetation/ groundcover/riparian function High Inflow event Negligent land management practices (including stormwater) Large scale development resulting in rapid growth, intensification and major infrastructure requirements Large scale failure of on-site or licensed Wastewater Infrastructure Catastrophic bushfire event Negligent management/deliberate introduction of pollutants, contaminants or pest species	Environmental incident (internal) or natural disaster (external). Serious Environmental Harm caused (i.e. >\$50000 to address). Breach of environmental legislation. Prosecution (by regulator) imminent for Seqwater actions or lack of action. Notification required to environmental regulator. Event requires a corporate response up to and including Board Level.
4—Major	Unplanned balance sheet effect (increase in debt) of \$10M - \$30M	3 – 5 Days Some work arounds	Actions resulting from an impact on the public:  • the public bringing legal action (not a class action)  • regulator imposing maximum statutory penalty  • major cost implications that the organisation will need to seek additional funding to meet  • major breach of Grid Contract, regulatory or common law obligations that impacts on a individual / discrete organisation of the South East Queensland community.	Concerns expressed at a national level by public and loss of trust and confidence in Water Grid operations on a particular issue.	Significant erosion and landslip Significant lack of vegetation/ groundcover/riparian function Inappropriate land management practices (including stormwater, runoff and agriculture) Significant failure of on-site or licensed Wastewater Infrastructure Significant bushfire event Inappropriate management of pollutants, contaminants or pest species	Environmental incident (internal) or natural event (external).  Environmental Harm caused (i.e. \$5000 - \$50000 to address and breach of environmental legislation.  Environmental Notice (issued by Regulator) imminent for Seqwater action or lack of action.  Environmental prosecution (issued by Regulator) possible for Seqwater action of lack of action.  Notification required to environmental regulator.  Event requires a corporate response to Executive Level.
(\$)(\$16 <sup>3</sup> (\$1 <sup>3</sup> (\$1))	Unplanned balance sheet effect (increase in debt) of \$5M -\$10M	1-3 Days	Action results from commercial loss:  • regulator imposing a moderate statutory penalty  • moderate cost implications able to be absorbed by the organisation  • breach of Grid Contract, regulatory or common law obligations that:  • also includes a deliberate breach of a procedural Grid Contract or regulatory or obligation.	Concerns expressed at a regional level by public and loss of trust and confidence in Water Grid operations on a particular issue (non life threatening)	Infrequent occurrences of erosion and landslip Poor vegetation/ groundcover/riparian function Poor land management practices (including stormwater, runoff and agriculture) Infrequent failure of on-site or licensed Wastewater Infrastructure Poor management of pollutants, contaminants or pest species	Environmental incident (internal) or natural event (external).  Environmental nuisance caused (i.e. <\$5000 to address and actual or potential breach of environmental legislation.)  Environmental Notice (issued by Regulator) possible for Seqwater action or lack of action.  Notification required to environmental regulator.  Event requires a corporate response to Leadership Level.

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Sequency control contr Action Flon for Enhanced Controls e dia Enhanced Combols Edicting Attachment 3 - Risk Register Template ERR Ref Risk Risk Owner



TRIM ref: D/11/11184

28 October 2011

Mr Peter Borrows Chief Executive Officer Seqwater PO Box 16146 City East Qld 4002

Dear Mr Borrows

### SEQ Water Grid Risk Management Plan

Please find attached the SEQ Water Grid Risk Management Plan, version 2.8, which was approved by the Rules Administrator, Queensland Water Commission, on 25 October 2011. A draft electronic copy of the Risk Management Plan was separately provided to your Risk Officers Committee representative in September 2011 to assist your staff in the timeliness of their response.

Please submit your strategies to address Key Risks identified in the Risk Management Plan (Grid Participant Risk Management Strategies) for our review by 24 November 2011 as required under s4.36(a) of *The Market Rules SEQ Water Market*. We will then review your plan within 10 business days of receipt and notify you of our findings in accordance with s4.36(b) of *The Market Rules SEQ Water Market*. We note that the target date for completion of some risk actions has passed, and will remain cognisant of that when reviewing your plan.

We are available to provide advice on the Risk Management Plan if needed. Our contact officer for this matter is Lee Hutchison, Risk and Emergency Manager, who may be contacted on or at

Yours sincerely

Barry Dennien
Chief Executive Officer

Enclosed: SEQ Water Grid Risk Management Plan, Version 2.8

PO Box 16205, City East Q 4002

www.seqwgm.qld.gov.au



TRIM ref: D/11/11184

28 October 2011

Mr Peter McManamon Chief Executive Officer LinkWater PO Box 1045 Spring Hill Qld 4004

Dear Mr McManamon

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Yours sincerely

Barry Dennien Chief Executive Officer

Enclosed: SEQ Water Grid Risk Management Plan, Version 2.8



9 January 2012

Mr Peter Borrows Chief Executive Officer Seqwater PO Box 16146 City East QLD 4002

Dear Mr Borrows



Seqwater Risk Management Strategy Resubmission Review

We received your Risk Management Strategy on 25 November 2011 for our review in accordance with Section 4.36 of *The Market Rules SEQ Water Market*.

Following final changes to your plan and submission as amended on 3 January 2011, our review confirms that your plan is consistent with the SEQ Water Grid Risk Management Plan (RMP) and addresses the Key Risks contained in the Water Grid RMP. As such, your plan is approved.

If you have any enquiries please contact Jason Boldeman, Risk and Emergency Coordinator, on telephone or via

Yours sincerely

Barry Dennien

Chief Executive Officer



### **Foreword**

Segwater is responsible for managing catchment sourced bulk water storage and treatment facilities for the supply of water for urban and rural use in South East Queensland.

Segwater's objective is to provide a whole-of-catchment knowledge-driven framework for benchmarking, accountability and sustainability.

### Introduction

Seqwater's Integrated Management System (IMS) consolidates the common requirements of the international standards for Quality (ISO9001), Environment (ISO14001), Occupational Health and Safety (OHSAS18001/AS4801) and HACCP Principles (ISO 22000) as they apply within Seqwater.

The objectives of Seqwater's IMS are to:

- Consistently provide product and service that meets customer requirements.
- Identify and comply with our legal, stakeholder and ethical obligations.
- Demonstrate accountability, stewardship, direction and control in the management of risk.
- Control or manage risk through processes of elimination, substitution, administrative actions, training, personal protection or a combination of these.
- Provide all necessary consultation, information, instruction, training and supervision necessary for the conduct of our business.
- Provide and maintain facilities, infrastructure, plant and equipment for the conduct of our business.
- Provide a safe and healthy working environment.
- Prevent pollution, minimise negative impacts and enhance environmental opportunities.
- Monitor and assess our performance.
- Identify and respond to issues of compliance and concern.
- Provide a framework for establishing and reviewing business objectives across quality, safety, and environment and drinking water agendas.
- Enhance our business and community reputation through continual improvement, innovation and reporting.

### Purpose and Scope of the Manual

This Manual documents an overview and framework for the Segwater IMS. It is supported by documents identifying the processes within the business for the implementation of the IMS.

This Manual is applicable to all structural, operational and maintenance elements of the activities of Segwater.

This Manual may be subject to auditing for systems compliance, adequacy and effectiveness.



### **Table of Contents**

FOREWORD	1
PURPOSE AND SCOPE OF THE MANUAL	1
GENERAL REQUIREMENTS	4
DOCUMENT AND RECORDS MANAGEMENT	
POLICY	5
PLANNING	5
ROLES AND RESPONSIBILITIES	5
INFRASTRUCTURE	6
RISK IDENTIFICATION AND ASSESSMENT  LEGAL AND OTHER REQUIREMENTS  OBJECTIVES AND TARGETS  CONTINGENCY PLANNING	7 7
IMPLEMENTATION AND OPERATION	8
TRAINING AND AWARENESS DESIGN AND DEVELOPMENTPURCHASING	g
PERFORMANCE ASSESSMENT	11
MONITORING AND MEASUREMENT  Control of monitoring and measuring devices  Processes and Activity Monitoring  Health and Well Being Monitoring  Customer Satisfaction  EVALUATION OF COMPLIANCE  INTERNAL AUDITING	11 11 11 11
IMPROVEMENT	12
ISSUE MANAGEMENT	12
BUSINESS REVIEW	13
REVIEW FOR CONTINUAL IMPROVEMENT	13
APPENDIX A: DEFINITIONS	14
APPENDIX B. REFERENCES	15



The Seqwater Integrated Management System is presented under the following headings.

### 1. General Requirements

- Document and Records Management
- Communication and Consultation

### 2. Polic y

• Management Systems Policies

### 3. Planning

- Organisational Structure roles and responsibilities;
- Infrastructure
- · Identification of risks and assessment of significance
- Legal and Other Obligations
- · Objectives and Targets
- Contingency Planning

### 4. Implementation and Operation

- People awareness, training and competency;
- Design
- Purchasing
- Operational Control

### 5. Performanc e Assessment

- Monitoring and Measurement;
- Evaluation of Compliance
- Internal Auditing

### 6. Improvement

• Issue Management

### 7. Business Review

System Review

The controlled version of this document is registered. All other versions are uncontrolled

Document Number: MAN-00004 Version Date: 15/07/2011 Page: 3 of 15

Document Owner: Document Approver: D Cross



### **General Requirements**

### Document and Records Management

Seqwater controlled documents and records can be:

- Internal Corporate Level documents and records
- Internal Site Level documents and records; or
- External documents and records.

Seqwater maintains and monitors documented processes for the management of controlled information. It provides for:

- Information to be classified depending on their level of confidentiality and security.
- Approval of documents for adequacy prior to issue.
- Review and update for currency.
- Changes and the current revision status of documents to be identified and communicated.
- Relevant versions of applicable documents are available at points of use.
- Documents and records to remain legible and readily identifiable.
- Documents and records of external origin to be identified and their distribution controlled.
- Prevention of the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.
- The storage, protection, retrieval, retention time and disposition of records.

Refer to <u>PRO-00001 Corporate IMS - Management of Controlled Documents and Records Procedure</u> for details.

### Communication and Consultation

### Seqwater:

- Maintains a documented process for internal communication.
- Maintains a documented process for external communication, including enquires and complaints.
- Maintains a documented process for stakeholder engagement.
- Maintains a documented process, agreed to by employees, for employee involvement and consultation.
- Maintains an intranet site for internal electronic communication and access to information.
- Maintains an internet site for external electronic communication and access to information.

Sequater reports performance and exceptions as part of licences and agreements in accordance with the terms of those documents.

Sequater produces annual reports on its performance and includes environmental information.

Records of communication and consultation will depend on factors such as the scale and the sensitivity of the activity.



### **Policy**

Segwater maintains a general Code of Conduct and Policy Statements for:

- Safety:
- Quality:
- Environment; and
- Drinking Water.

These policies may be individual or integrated statements across two or more topics.

### Policies are:

- Authorised by the Chief Executive Officer and Chairman.
- Reviewed to ensure currency.
- Communicated to persons working for or on behalf of the organisation through induction processes.

### **Planning**

### Roles and Responsibilities

Seqwater maintains a current organisation chart identifying roles and organisational structure. Roles and responsibilities are formally documented in Position Descriptions for employees and in the terms of engagement for contracts. Roles and responsibilities and work performance are reviewed on a regular basis through a position appraisal process.

The Executive Leadership Team (ELT) has overall responsibility for Safety, Quality, Environmental and Water Quality matters. The following ELT management representatives have been identified in Position Descriptions:

- Manager, Water Quality and Environment HACCP Management System.
- Manager, Water Quality and Environment– Environmental Management System.
- Manager, Workplace Health and Safety OHS Management System.
- Manager, Process Improvement Quality Management System.
- Manager, Process Improvement Integrated Management System Manual.

The management system management representatives have, as a minimum, the roles, responsibilities and authority for:

- Ensuring that management systems are implemented and maintained in accordance with the requirements of the relevant National and International Standards,
- Reporting to top management on the performance of the management system for review, including recommendations for improvement.

All employees and contractors are required to work in a manner consistent with the policies and procedures of Seqwater.



### Infrastructure

Seqwater:

- Maintains a register of assets.
- Maintains, as appropriate, a maintenance program and/or support for those assets.
- Uses budget processes for ongoing and capital expenditure in relation to those assts.

**NOTE:** Se qwater infrastructure in cludes Bui Idings, workspace and associated utilities; Process equipment (both hardware and software) and supporting services (such as transport or communication).

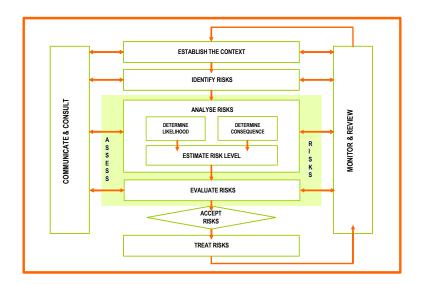
### Risk Identification and Assessment

Seqwater maintains documented processes in accordance with ISO 31000 requirements for risk management:

- **Establish the context:** Establish the external, internal and risk management context in which the rest of the process will take place. Criteria against which risk will be evaluated is established and the structure of the analysis defined.
- **Identify risks:** Identify where, when, why and how events could prevent, degrade, delay or enhance the achievement of the objectives. This includes the identification of legal and other obligations of the organisation applicable to identified risks.
- Analyse ris ks: Identify and evaluate existing controls. Determine consequences and likelihood and hence the level of risk. This analysis considers the range of potential consequences
- **Evaluate risks:** Compare estimated levels of risk against the pre-established criteria and consider the balance between potential benefits and adverse outcomes. This enables decisions to be made about the extent and nature of treatments required and about priorities.
- **Treat risks:** Develop and implement specific cost-effective strategies and action plans for increasing potential benefits and reducing potential costs.
- Monitor and review: It is necessary to monitor the effectiveness of all steps of the risk
  management process. This is important for continuous improvement. Risks and the
  effectiveness of treatment measures need to be monitored to ensure changing
  circumstances do not alter priorities.
- Communicate and Consult: Communicate and consult with internal and external stakeholders as appropriate at each stage of the risk management process and concerning the process as a whole.

Refer to PRO-00801 Corporate Legal and Risk - Risk Management Procedure for details.





ISO 31000 Risk Model

### Legal and Other Requirements

### Seqwater:

- Identifies and has access to the applicable legal requirements and other requirements to which the organisation subscribes related to its management systems.
- Identifies how these requirements apply to its identified aspects/risks/hazards.
- Keeps this information current.
- Takes legal and other obligations into account in maintaining its management systems.

### **Objectives and Targets**

### Seqwater:

- Maintains registers of Objectives, Targets and Plans raised within the systems that are the scope of this Integrated Management System.
- Maintains Plans to achieve approved objectives and targets that includes, as applicable:
  - The Objective and Target.
  - Any hazard/impact and subsequent control or critical measure identified from considerations.
  - Designation of responsibility for achieving the objective and target at relevant functions and levels.
  - The means and time-frame by which the objective and target is to be achieved, including monitoring and response if any defined critical measure is exceeded.
- Provides regular briefings to ELT on the progress of objectives and targets.

Refer to PLN-00025 Corporate - Strategic Plan 2011-12 to 2015-16 for details.

### Contingency Planning

Segwater document and manage their obligations in an Emergency Response Plan through:



- An Emergency Response Plan.
- A Communication Protocol and On-Call Arrangements.

Seqwater maintains an after-hours on-call roster for a number of positions which supports the Incident Management Plan. The on-call positions operate under a rostered timetable which ensures Seqwater can adequately respond to and support after hours incidents and other required business needs. This information is supplemented by a training program.

A monthly report is provided to the Water Grid Manager on Emergency Responses.

Refer to ERP-00001 Corporate IERP - Incident and Emergency Response Plan for details.

### Implementation and Operation

### Training and Awareness

When staff and contractors commence employment, they undertake general inductions that provide, as a minimum:

- An awareness of the relevance and importance of their activities and how they contribute to the achievement of the quality policy and objectives.
- An awareness of the relevance and importance of the Management Systems that includes the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system, the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance, their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and the potential consequences of departure from specified procedures.
- An awareness of the relevance and importance of the Management Systems that includes the characteristics and composition of the workforce which impact on occupational health and safety management; and responsibilities, hazards and risks.
- Emergency response actions (e.g. evacuation signal, assembly point, incident management)

The level of induction given to short-term visitors and contractors will be a basic summary of this information.

### For employees, Segwater:

- Determines the competence of staff and document this information in Position Descriptions.
- Confirms the competency as part of the interview and selection process.
- Establishes and provides and evaluates the effectiveness of agreed training or takes other documented action where there are any gaps in the competencies required to perform the work.
- Reviews training needs as part of the regular performance appraisal process.

### For specific roles:

• Those representing the employees and employer on Safety Committees receive appropriate training to undertake effectively their involvement in the development, implementation and review of OHS arrangements.



• For technical contract staff, evidence of current qualifications (if required for the job – e.g. forklift ticket or electrical license) and current insurances will be required prior to being authorized to conduct work at a Segwater location.

Seqwater maintains records relevant to the required competencies of its st aff and contract staff.

### **Design and Development**

Sequater does not conduct design or development for external parties. The requirements of Section 7.3 of ISO 9001:2008 are therefore not applicable for system certification purposes.

Seqwater maintains documented processes for internal design and development that address.

- Defined design and development outputs.
- Information for purchasing, production and for service provision.
- Acceptance criteria.
- Characteristics of the product essential for its safe and proper use.
- Systematic reviews and verification of approved outputs.
- Review, verification and validation, as appropriate, and approval of any changes before implementation.
- Document and record keeping requirements.

### **Purchasing**

Seqwater purchases are conducted in accordance with the Queensland State Procurement Policy. The State Procurement Policy delivers benefits for Government, suppliers and the community through the commitment to three equally ranked objectives: advancing Government Priorities, seeking value for money and purchasing with probity and accountability.

With regards to suppliers, Seqwater:

- Selects suppliers based on their ability to supply product in accordance with Seqwater defined requirements.
- Maintains a list of preferred suppliers for nominated products.

With regards to products, Seqwater:

- Maintains a listing of preferred products that are suitable for use.
- Ensures the adequacy of specified purchase requirements prior to their communication to the supplier.
- Uses preferred suppliers for nominated products as the first option.
- Ensures that purchased product meets specified purchase requirements
- Segregates incorrect, unsuitable or damaged product to ensure that it is not used.

On an ongoing basis, Segwater:

- Maintains current Material Safety Data Sheet (MSDS) information for all relevant products.
- Evaluates suppliers against Segwater defined expectations.
- Reviews existing products and new alternatives to eliminate or further reduce economic, safety and environmental impacts and maintain or improve quality outcomes.



Refer to POL-00026 Corporate Finance - Procurement Policy and Procedures for details.

### Operational control

Operational controls are documented in Works Programs, Manuals, Procedures, Work Instructions, Position Descriptions or other equivalent documents. These documents will typically provide, as appropriate, descriptive and prescriptive information, that is:

- Descriptive
  - Track what actually happens (e.g. process flow charting)
  - Identifies steps and/or desired outcomes
  - Identifies potential risks and critical measures
- Prescriptive
  - How the activity should be performed
  - Roles and responsibilities
  - The use of suitable equipment
  - The requirements of competencies of persons
  - o Activity monitoring, measuring and data/sample traceability
  - Release, delivery and post-delivery activities

In determining how an activity should be performed given potential risks, Segwater acknowledge the hierarchy of control with elimination and the preferred outcome.

1. Elimination	If you eliminate a hazard you completely eliminate the associated risk.
2. Substitution	You can substitute something else (a substance or a process) that has less potential to cause injury.
3. Isolation/engineering	You can make a structural change to the work environment or work process to interrupt the path between the worker and the risk.
4. Administrative	You may be able to reduce risk by upgrading training, changing rosters or other administrative actions.
5. Personal protective equipment	When you can't reduce the risk of injury in any other way, use personal protective equipment (gloves, goggles, etc.) as a last resort.

Document Approver: D Cross Document Owner: M Bruce



### **Performance Assessment**

### Monitoring and Measurement

### Control of monitoring and measuring devices

Seqwater maintains processes to ensure, as appropriate:

- Plant and equipment required to be calibrated is identified and these items are calibrated or verified at specified intervals.
- Calibrated plant and equipment is protected from damage and deterioration during handling, maintenance and storage.
- · Records of the results of calibration and verification are maintained
- Only currently calibrated or verified plant and equipment is used.

External services provide evidence that demonstrate information generated for Seqwater is accurate (e.g. use of NATA-certified laboratory for specified analysis, calibration of equipment used in the collection of GIS data.)

### **Processes and Activity Monitoring**

Segwater use checklists to:

- Promote ownership at a local level.
- Help ensure consistency and completeness in monitoring of activities.
- Identify a process deficiency or failure requiring attention.
- Verify when an activity is being conducted correctly.

Refer to PRO-00013 Corporate Safety - WorkSite Inspections Procedure for details.

### **Health and Well Being Monitoring**

### Segwater:

- Identifies those situations where employee health surveillance is required. Where specified by legislation, the health of employees exposed to specific hazards shall be monitored and recorded.
- Manage all medical records are treated a confidential. Employees have access to their own individual results.

Refer to PRO-00020 Corporate Safety - Health Surveillance Procedure for details.

### **Customer Satisfaction**

Seqwater monitors information relating to employee perception as to whether it has met its requirements to employees. This measurement shall be conducted on a regular basis by way of an employee survey called "Streamline" and provides us with valuable feedback on what is already working well and what improvement actions are needed to enable us to work more effectively as teams and leaders within Seqwater.

Seqwater's Chief Executive Officer and other senior management engage in a variety of formal and informal customer, regulator and stakeholder communication and liaison



activities, to facilitate cooperation in industry benchmarking, water strategy and in planning and development.

### **Evaluation of Compliance**

Seqwater will use its internal auditing processes to evaluate compliance with legal and other requirements to which it subscribes.

### Internal Auditing

### Segwater:

- Maintain a documented process for internal auditing and an internal audit schedule communicated to ELT.
- Ensure persons conducting internal audits are appropriately trained and independent of the processes being audited to avoid a conflict of interest.
- Communicate the results of internal audits to the ELT and relevant managers/coordinators.

The Audit Schedule is planned with consideration for:

- The status and importance of the processes and areas to be audited.
- The results of previous audits.
- Incidents, complaints and other contributing factors.

The following principles relate to selection and expected conduct of auditors.

- Ethical conduct: the foundation of professionalism
- Fair presentation: the obligation to report truthfully and accurately
- Due professional care: the application of diligence and judgement in auditing
- Independence: the basis for the impartiality of the audit and objectivity of the audit conclusions
- Evidence-based approach: the rational method for reaching reliable and reproducible audit conclusions in a systematic audit process

Refer to PRO-00002 Corporate - IMS Internal Audit Procedure for details.

### **Improvement**

### Issue Management

### Seqwater:

- Maintain a documented process for corrective and preventive actions.
- Maintain a register of corrective and preventive actions.
- Manage communication with external parties for significant and legally reportable matters.
- Investigate and respond to correct and prevent reoccurrence.
- Provide the ELT with a regular report of the number of and status of matters managed through corrective and preventive actions.

Refer to PRO-00003 Corporate - Issue Notification and Response Procedure for details.



### **Business Review**

### Review for Continual improvement

The management representatives for the Safety, Quality, Environmental and Water Quality Management Systems conduct reviews and report to the ELT on a monthly basis to ensure the various management systems suitability, adequacy and effectiveness. The following information is reviewed and reported on at least once per year:

- Certification reviews and their recommendations.
- Whether the system is operating effectively.
- Adequacy of the policies.
- The extent to which system objectives and targets have been met.
- Communication(s) from interested parties, including complaints.
- Results of audits, compliance assessments, inspection and monitoring activities.
- Status of corrective and preventive actions and timeliness of resolution.
- Changes in the external and internal environment, including legal and other obligations.
- Adequacy of resources, structure and personnel.
- Longer term continual improvement initiatives.
- Changes to compliance processes to ensure effective integration with operational practices and systems.

Management System reviews are also communicated through the monthly CEO Report to the Seqwater Board.



### **Appendix A: Definitions**

Definitions are from the relevant standards for Governance (AS8000), Quality (ISO9001), Safety (AS4801), Food Safety in respect to HACCP (ISO22000) and Environment (ISO14001)

**Corporate Governance:** The system by which entities are directed and controlled. NOTE: There is no one global applicable definition but some useful statements include:

'Corporate governance is concerned with improving the performance of companies for the benefit of shareholders, stakeholders and economic growth. It focuses on the conduct of, and relationships between, the board of directors, managers and the company shareholders.

'Corporate governance generally refers to the processes by which organizations are directed, controlled and held to account. It encompasses authority, accountability, stewardship, leadership, direction and control exercised in the organization.

**Critical Co ntrol Point (CCP):** Step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level

**Environment:** Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation. NOTE: Surroundings in this context extend from within an organization to the global system.

**Environmental Management Sy stem (EMS):** Part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects.

Occupational health and safety management system (OHSMS): That part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the OHS policy, and so managing the risks associated with the business of the organization.

**Quality:** Degree to which a set of inherent characteristic fulfills requirements.

**Quality Ma nagement System:** The way and organization carries out business activities associated with quality. Broadly, it consists of your organizational structure together with the documentation, processes and resources you use to achieve your quality objectives and to meet your customers' requirements.

**Safety:** A state in which the risk of harm (to persons) or damage is limited to an acceptable level.

**Stakeholder:** Those people or entities who may affect, be affected by, or perceive themselves to be affected by, a decision or activity. NOTE: As recent corporate collapses have shown, the community is a major stakeholder in all Australian entities.



Page: 15 of 15

### **Appendix B: References**

### Australian Standards:

4801 Occupational Health and Safety Management Systems - Requirements 8000 Corporate Governance

### **British Standards and Publically Available Specifications:**

PAS99: Integrated Management Systems

### **International Standards**

31000	Risk Management
9001	Quality Management Systems—Requirements
14001	Environmental Management Systems – Requirements
22000	Food Management Safety Systems - Requirements

### Legal:

Environmental Protection Act (Qld) and subordinate Regulations Integrated Planning Act (Qld) and subordinate Regulations Workplace Health and Safety Act (Qld) and subordinate Regulations Water Act (Qld) and subordinate Regulations

### Other:

ASX Corporate Governance Council **OECD Principles of Corporate Governance** Queensland Water Grid Manager Emergency Management Plan PLN-00025 Corporate - Strategic Plan 2011-12 to 2015-16

Document Approver: D Cross



### **Risk Management Policy**

Seqwater is responsible for managing catchment sourced bulk water storage and treatment facilities for the supply of water for urban and rural use in South East Queensland.

In undertaking its responsibilities Seqwater seeks to demonstrate accountability, stewardship, direction and control through its managing risks based on ISO/AS/NZS 31000 Risk Management – Principles and Guidelines.

The Enterprise Risk Management System in Seqwater is the coordinated activity comprising the risk identification, assessment, evaluation and monitoring of risks across all areas of the organisation. The overall aim of the enterprise risk management system is to ensure that capabilities and resources are employed in an efficient and effective manner to manage both opportunities and threats across the organisation.

Risk Management in Seqwater will be aligned with the following enterprise risk management principles. Risk management:

- · creates and protects value
- is an integral part of all Seqwater systems and processes
- · is part of decision making
- · explicitly addresses uncertainty
- is systematic, structured and timely
- · is based on the best available information
- · is tailored to Seqwater's risk profile
- · takes human and cultural factors into account
- · is transparent and inclusive
- is dynamic, iterative and responsive to change
- · facilitates continual improvement of the organization

The Board, Chief Executive Officer, Executive General Managers and Risk Manager have specific responsibilities for risk analysis and risk management at an enterprise and group level; this Policy applies to all activities of Sequater. It will be regularly reviewed for currency, opportunities for continual improvement and to maintain alignment with the corporate strategic direction and goals.

Peter Borrows
Chief Executive Officer

40 Feb 2010

Date

Phil Hennessy Chairman

10 Fob 2010

Date



# Our Risk Journey

2 February 2011

## Agena

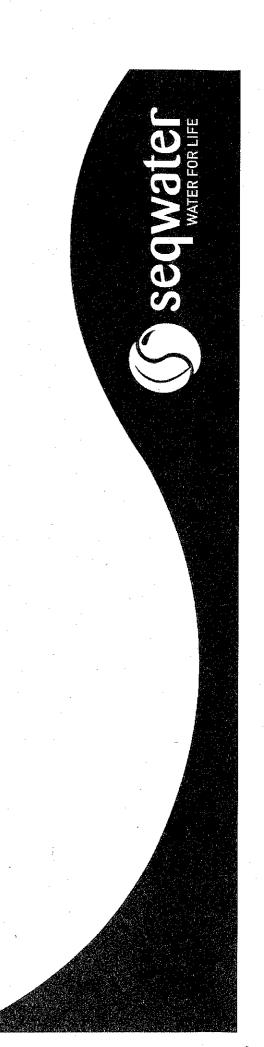
1. Risk Journey Timeline

i. 2009

. 2010

2. Achievements

3. Looking Ahead 2011 and Beyond



# Risk Journey Timeline

### 2009

- "As Is" Review undertaken (KPMG)
- Enterprise Risk Register developed
- Priority Risk Reporting to the Board commences
- Consolidated Water Grid risk assessment tools
- Risk Management Policy approved
- Risk Management Framework
- Summer Risk Assessment conducted



# Risk Journey Timeline

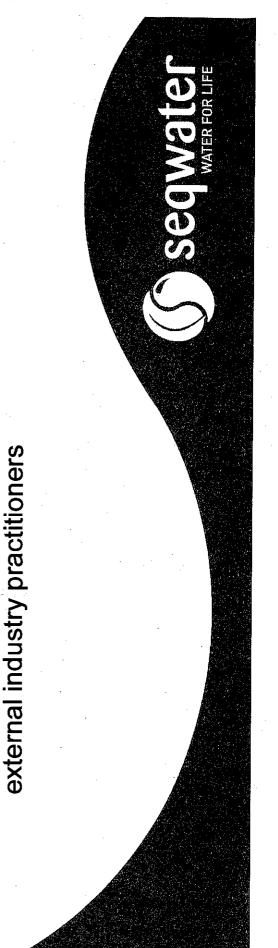
### 2010

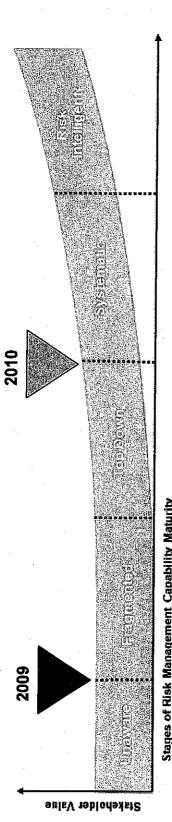
- Risk Assessment Team established
- Risk Management Procedure approved
- ISO 31000 incorporated into policy and procedure
- Consolidated risk management tools for Seqwater
- Corporate Performance Reporting (CP&R) CIS module
  - Priority Risks reporting to the Board commences
- Consolidation of insurance policies resulting in \$ 200,000 saving
- · Linking insurance policies to risk profile
- Increased Directors & Officers' (D&O) cover
- Formation of Legal and Risk Team
- Risk used to inform strategic and operational priorities (2011-12)
- Operational risk registers
- Maturity Capability Assessment undertaken (Deloitte)
- Business Continuity Framework approved
- Summer Risk Assessments conducted



## Achievements

- Risk Management Framework approved (incorporating Risk Policy, Risk Management Procedure and Tools)
- Regular Board reporting
- Integration of insurance policies with our risks
- Considerable savings Insurance Premiums
- Risk linked to operational planning (CP&R Module)
- Grid-wide collaboration of risks
- Business Continuity Planning commenced
- Risk Management is considered as "Systematic" by





Maturity
<b>Sapability</b>
Management (
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	Risk Intelligent
	Systematic
Typical Attributes	Top Down
	Fragmented
	Unaware

- Ad hoc/chaotic
- capabilities, and verbal Depends primarily on individual heroics, Wisdom
- management activities Independent risk
  - linkage between risks Limited alignment of Limited focus on the risk to strategies
- Disparate monitoring & reporting functions
- Communication of top strategic risks to the assessments Routine risk Board policy
  - Executive/Steering Committee
- Knowledge sharing across risk functions
- Formal risk consulting Awareness activities

Dedicated team

embedded in strategic allocation, product Risk discussion is development, etc. planning, capital

management activities

Coordinated risk

Common framework,

program statement,

· Risk appetite is fully

defined

across silos

performance measures Early warning risk indicators used and incentives - Linkage to

monitoring, measuring,

and reporting

Enterprise-wide risk

modeling/scenarios \* Risk

· Contingency plans and

implementation

Technology

escalation procedures

Risk management

training

 Industry benchmarking used regularly



## **Looking Ahead**

- Implementation of Recommendations from Maturity Capability Assessment (Deloitte)
- Support Commission of Inquiry Insurance
- Implementation of Business Continuity Plans (Priority Processes)
- Consolidation of insurance policies (WaterSecure)
- Integration of Insurance Brokers (Aon and Marsh)
- Fraud Prevention and Detection Education
- Internal Audit Report Business Continuity Planning
- Water Grid Risk Management (Resilience) Plan approval (Rules Administrator)
- Segwater Risk Management Plan







### **RISK MANAGEMENT**

**Board Meeting Date: 13 August 2010** 

ITEM No. 17

Prepared By:

Jeff Lyddon, Principal Risk Advisor

Presented By:

Helen Moore, Executive General Manager - Business Services

Attachments:

**Priority Risks - ATTACHMENT A** 

### RECOMMENDATION

That the Board notes the attached Priority Risks.

### **EXECUTIVE SUMMARY**

### **Priority Risks**

This paper provides an update of the Priority Risks. The update incorporates the following action items of the Board meeting of 9 July 2010.

1. In respect of Priority Risk 4.1 (a deterioration of construction site next to 240 Margaret Street), send a letter to Council in similar terms to the letter sent to Deloitte.

The following outlines the progress into resolving this matter.

- The letter dated 8 July 2010 sent to Deloitte seeking outcomes of existing Brisbane City Council Development Application identified there was no opportunity to pursue any matters through Brisbane City Council. This is due to the Development Application being approved and once they have commenced work on this site.
- A response was received from Deloitte noting Seqwater's concerns relating to the site.
   In this response, Deloitte has also confirmed the following:
  - Anchormac has been engaged by the administrators to continue monitoring the retaining walls, footpaths and adjoining buildings.
- It has been confirmed that the property has been sold to the Billbergia Group with a settlement date of 23 November 2010.
- Preliminary consideration of the QBWSA property impacts are considered to be low risk due to the size and siting of the building.
- Property and Facilities propose to engage the services of a structural engineer to further examine any issues which may impact on the 240 Margaret Street property.

Consideration was given to the Board's request to send a letter to Council in similar terms to the letter to Deloitte. However, this would not be beneficial to Sequater as this action may lead to a potential "default notice" being placed on the property impacting on the current settlement process.



### **RISK MANAGEMENT**

**Board Meeting Date: 13 August 2010** 

Provide more detailed information as to how the identified priority risks are being mitigated pending implementation of measure which addresses/removes the identified risks.

Priority risks relate to those risks which are immediate and "keep us awake at night". Such risks emerge from changes to objectives or opportunities requiring immediate action. The Priority Risks Report has been reviewed to confirm these risks exist and details what is being done about them. The attached Priority Risks Report has been amended accordingly. Some of the medium to long term priority risks have been removed as they are no longer an emerging or immediate risk. It should also be noted that the mitigation strategies are being undertaken now and resources reallocated to respond to such priorities.

The risk management framework supports this process through monitoring of our activities to ensure they are contributing to reducing the likelihood or consequence through strengthening our controls. Monitoring occurs through:

- Weekly Executive Leadership Team meetings;
- Monthly Water Rats (Cross-organisational Risk Assessment Team) meetings;
- Audits
- Corrective action from incidents; and
- Assurance Map.

Further activities that are undertaken to support our capacity to reduce the risk profile include:

- The implementation of our strategic initiatives;
- Utilising existing relationships with our grid partners to share strategies to common risk;
- Being flexible to ensure that the reallocation of resources can occur to mitigate risk; and
- The insurance program provides for a further mitigation strategy.

### **ISSUES**

There are no significant issues.

### LINKAGE TO SUSTAINABILITY CHARTER, STRATEGIC AND OPERATIONAL PLANS

This activity is consistent with performance objectives relating to risk contained in the Seqwater Operational Plan.

### **RISK IMPLICATIONS**

Enterprise Risk Category	Risk Statement	This Paper – Risk Mitigation
Governance	Lack of governance framework results in ineffective controls and decision making.	External reviews have identified shortfalls in the governance framework which are currently being addressed.

### seqwater son use

### **RISK MANAGEMENT**

**Board Meeting Date: 13 August 2010** 

### **FINANCIAL IMPLICATIONS**

The establishment and coordination of the enterprise risk management framework is undertaken by the Legal and Risk team. Its budget includes staff costs and project related advisory resources.

**Executive General Manager** 

Chief Executive Officer

Date:

Heien-Moore
Peter Borrows

### PRIORITY RISKS August 2010

Attachment A

Risk Priority	Risk Description	}	(Existing) Residual	ERR Ref.
-	Our fluoride dosing facilities are unable to reliably meet the regulated standa	he regulated standard of 0,7-0.9 mg/L thus impacting on our reputation.	KISK	2.2
	<ul> <li>Current Mitigation Strategies</li> <li>Jan – Mar quarterly report shows 5 of the 5 stage 1 plants are compliant with one plant (Mudgeeraba) performing reporting will comm consistently at 0.7. Improvements being carried out to plants have demons increase the dosage within the acceptable regulated standard.</li> <li>Discussing with OLD Health how to best manage and report</li> </ul>	Agreement has been reached with Queensland Health that reporting will commence when we are satisfied that stage 2 plants have demonstrated consistent performance.  In the meantime, we are bedding down our performance at all the fluoride sites.	80	
	ongoing compliance issues from both Stage 1 and Stage 2			
7	Stand alone communities do not have an alternative water supply when the assets (natural and built) are in poor condition and the population is too big to effectively tanker water.	assets (natural and built) are in poor condition and the	8	23
	Current Mitigation Strategies include:	Progress On-going monitoring of our supply levels is occurring, particularly with non-grid connected sites.		
	<ul> <li>where possible.</li> <li>This risk is monitored through the Risk Officers' Committee for grid and non-sincluded on the Whole-of Grid Risk Register.</li> </ul>	In addition, Business Contingency plans will be established for grid and non-grid sites throughout 2010-11. Roll out of this strategy will occur by prioritising grid, non-grid and recreational sites		•

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Attachment A	(Existing) Residual	Risk
A	(J)	
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August 2010	tion	
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m	Somerset Hydro-electricity Project not going to be completed by December 2010	December 2010		1'9
	<ul> <li>Current Mitigation Strategies</li> <li>Plan being prepared for Executive Leadership Team and will outline priority activities to reduce our project risk exposure</li> </ul>	<ul> <li>Progress</li> <li>Business impact assessment being undertaken to determine next course of actions.</li> </ul>	High	
	<ul> <li>New project manager has been engaged to investigate the outstanding issues on site.</li> </ul>	<ul> <li>Executive Leadership Team to be informed of the outcome of this process and determine approach.</li> </ul>		
		<ul> <li>Maintenance of the hydro plant may be completed by December 2010 but commissioning will not commence until January/February 2011.</li> </ul>		
4	QWC's recommendation to defer construction of Wyaralong WTP by 10-16 years impacts on our asset planning objectives.	by 10-16 years impacts on our asset planning objectives.		23
	There is a possibility that QWC may make a recommendation to delay construction by 10-16 years.	Progress  Consideration is currently being given to our long	<b>68</b>	
	If deferral occurs, this decision will impact water supply for both	term asset planning strategy to determine how this will affect our major infrastructure projects.	Only if decision is not	
	asset planning potentially requiring rescheduling of some infrastructure projects.	undertaken to determine how to prepare for this event should it occur.	naaroid or	
5	QWC's recommendation creates delays to the existing Wyaralong WTP project.	WTP project.		3.
	<ul> <li>Current Mitigation Strategies</li> <li>Determine appropriate strategies to reduce impact of potential delay.</li> </ul>	<ul> <li>Progress</li> <li>Design due to be finished December 2010.</li> <li>Delays in the decision will impact on project costs and resources and could result in the inability of Seqwater meeting expected delivery date.</li> </ul>	<b>100</b>	
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ent A	ERR Ref	\ \ \ \ \		3.2	
Attachment A	(Existing) Residual Risk		<b>30</b>		High cation to Medical for removal
August 2010	<b>Description</b>		Progress An update on the progress of these mitigation strategies is provided in the WH&S Board Paper presented on 13 August 2010.	ur ability to provide quality water supplies.	Progress  Project Team to be established to coordinate due diligence and handover activities  Commencement of distribution/retail entities and the potential relocation to commencement of distribution/retail entities and the potential relocation to commencement of distribution for accommodation requirements, incorporating feedback from the water entities' CEOs, incorporating feedback from the water entities' CEOs, was provided to Dept of Public Works.  Change management strategy has now been developed to manage the transition to Ipswich. We continue to work closely with impacted water entities. This risk does not impact us until 2013-14 and is not considered a priority risk now. Preparation for the relocation has commenced.
	Risk Descr	There are limited controls to ensure the safety of our contractors.	Current Mitigation Strategies including: Provision of procedures to ensure potential safety risks are managed through the pre-tender, tender evaluation and contractor management processes.	The handover of Wyaralong Dam from QWI impacts on our ability	OWI has project managed the construction of the Wyaralong Dam project. Given the size of the project and the broad reaching impacts, it is recommended that work commences to work through:  • Legal and contractual issues • Commissioning issues • Handover arrangements • Water quality objectives • Financials • Due diligence matters • Due diligence matters  Seqwater cannot attract and retain its people due to the commen lpswich.  Current Mitigation Strategies including: • Clarifying the expectations and timeframes from Government • Clarifying the expectations and timeframes from Government • Developing transition arrangements for the relocation • Consideration being given towards regionalisation options to maximise operational efficiency
	Risk Priority	9		7	<b>&amp;</b>

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August 2010

		August 2010	Attachment A	ntA
Risk Priority	Risk Descri	escription	(Existing)	ERR
6	Seqwater is still working towards full WH&S compliance		Viel W I Babble	122
	<ul> <li>Current Mitigation Strategies including:         <ul> <li>Policies and procedures are being developed and implemented across the organisation</li> <li>Our people currently demonstrate their WH&amp;S safety requirements through training and assessment processes</li> </ul> </li> </ul>	Progress An update on the progress of these mitigation strategies is provided in the WH&S Board Paper presented on 13 August 2010.	Recommend for removal	
	<ul> <li>nisk Assessinent and registers currently being established at each site</li> <li>Permit to work arrangements being established</li> <li>Priority is given to hazardous substance and dangerous goods.</li> </ul>		•	
10	A proposed grid-wide approach towards communications impacts	mpacts on our reputation		1.9
	Current Mitigation Strategies  Continue dialogue with SEQ Water Grid Manager, DERM and supply chain partners to determine grid-wide communication processes to clarify roles and responsibilities of each grid participant. There is intention for the Water Grid Manager to control all communications across the grid on behalf of all water	Progress SEQ Water Grid Manager has assumed control of all communications with our stakeholders and the community. Working closely with grid participants and grid-wide	Recommend for removal	
	entities and distribution entities. This may impact on Seqwater's reputation should clear roles, responsibilities and protocols are not clearly defined.	relationships.		

	<b>a</b>	PRIORITY RISKS			٠.
		August 2010	Attachment A	ıt A	
Risk Priority	Risk Descri	escription	(Existing) Residua! Risk	ERR Ref.	· <i>·</i>
11	The construction site next to 240 Margaret Street deteriorates while in the hands of the administrators potentially impacting on the stability of our building.	ille in the hands of the administrators potentially impacting	onthe	4.1	
	Current Mitigation Strategies	Progress The letter detect to India 2010 user cont to Poleitte acciding			
		outcomes of existing Brisbane City Council Application	Revised		
	<ul> <li>Reviewing Deed entered into with Vision in relation to the</li> </ul>	Identified there was no opportunity to pursue this matter	downwards		
	shoring works undertaken at the adjoining site to determine	through Brisbane City Council. This is due to the			
	Seqwater's rights including in the event of sale of the	Development Application being approved and once work	Recommend		
	adjoining site to a third party purchaser;	commenced there is no avenue for us. A response was	for removal		
	<ul> <li>Correspondence has been sent to the administrators putting them on notice that Segwater will seek to recover any losses</li> </ul>	received from Deloitte noting Seqwater's concern and confirming the following:			
	and otherwise protecting Seqwater's rights; and	<ul> <li>Anchormac has been engaged by the administrators</li> </ul>			
	<ul> <li>Currently considering whether it would be beneficial to</li> </ul>	to continue monitoring the retaining walls, footpaths			
	obtain its own assessment of the risks to Seqwater's assets	and adjoining buildings.			
	associated with the deterioration of the adjoining site	<ul> <li>That the property has been sold.</li> </ul>			
		A recent assessment of our property has identified that		•	
		due to the siting and positioning of the 240 Margaret St			
		building, the risk is low. This will be confirmed by the	· · .		
		appointment of a building engineer.			
				•	



### **Corporate Legal and Risk**

Risk Management Procedure





### **Table of Contents**

Introduction	<u> </u>	3
Purpose	<u>.</u>	s
Scope		
Objectives		
Risk Management Process		4
• Establish the context		5
<b>⊘</b> Identify risks		7
Analyse risks		·
Evaluate risks		11
<b>5</b> Treat Risks	•	
<b>6</b> Continuous Activities		15
Referenced Information	· · · · · · · · · · · · · · · · · · ·	
Definitions		_
Appendix 1: Risk Likelihood Table	-	20
Appendix 2: Risk Consequence Table		
Appendix 3: Risk Register Template		28



### Introduction

The Queensland Bulk Water Supply Authority, trading as Seqwater is responsible for managing bulk water supply and water treatment assets throughout South East Queensland. The ISO/AS/NZS 31000 Risk Management – Principles and Guidelines and ISO/AS/NZS 31010 – Risk Assessment Techniques have been used as the basis for risk management within our organisation.

Risk is defined as an event that may have an impact on the achievement of Seqwater objectives. Risk is the uncertainty of the outcome of actions and events, whether a positive opportunity or a negative threat. Risk Management involves identifying and assessing risks and then responding to them appropriately.

### **Purpose**

The purpose of this procedure is to document a systematic process to establish the context and to identify, assess, evaluate and treat risks across Seqwater. This includes reporting, roles, responsibilities and monitoring and review.

### Scope

This procedure is applicable to all sites and activities over which Seqwater has control or influence. It provides for the identification, assessment and evaluation of the following risk categories:

- People
- Safety
- Water (Quality and Quantity)
- Assets
- Security (Physical and Natural Events)
- Governance
- Reputation
- Public Safety

### **Objectives**

The objectives of this procedure are to support us in achieving:

- A strategic and organisational approach to manage risks for Seqwater activities
- Effective strategic (enterprise) and operational planning with established linkages that provide confidence in achieving such objectives
- Organisational resilience to proactively respond to unplanned situations
- Effective recognition and action for continual improvement
- A risk awareness culture through communication of the risk management process
- Effective recognition of opportunities

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### **Risk Management Process**

The Seqwater Risk Management procedure is based on the application of ISO 31000 and ISO 31010. Seqwater conducts ongoing communication and consultation with all involved parties to ensure understanding of the process and its intended outcomes. The key steps in the process are briefly described as follows:

Ste	p	Description	
0	Establish the context	the rest of the	external, internal and risk management context in which process will take place. Criteria against which risk will be uld be established and the structure of the analysis
0	Identify risks		, when, why and how events could prevent, degrade, ce the achievement of the objectives.
69	Analyse risks	likelihood, and	valuate existing controls. Determine consequences and hence the level of risk. This analysis should consider the tial consequences and how these could occur.
<b>4</b>	Evaluate risks	and consider outcomes. Thi nature of treatr	nated levels of risk against the pre-established criteria the balance between potential benefits and adverse s enables decisions to be made about the extent and ments required and about priorities.
			with Seqwater-wide impacts or unacceptable risk ratings e Leadership Team.
		Escalate risks Water Grid Ma	with Grid-wide impacts or unacceptable risk ratings to the nager
5.	Treat risks	•	implement specific cost-effective strategies and action asing potential benefits and reducing potential costs.
6	Continuous activities	Communicate and consult	Communicate and consult with internal and external stakeholders as appropriate at each stage of the risk management process and concerning the process as a whole.
		Monitor and review	It is necessary to monitor the effectiveness of all steps of the risk management process. This is important for continuous improvement.
			Risks and the effectiveness of treatment measures need to be monitored to ensure changing circumstances do not alter priorities.



### • Establish the context

### **SEQ Water Grid Context**

The purpose of the South East Queensland Water Grid (SEQ Water Grid) is 'Secure and Efficient Water Supply' for South East Queensland (SEQ). The strength of the SEQ Water Grid is the sum of its people, processes, systems and assets; not just the individual entities or assets. The assets and operations within the SEQ Water Grid have, via the institutional reforms, allocated common asset types and functional processes in the water supply chain to specific entities. This recognises the benefits of concentrating operational skills and experience within those entities and allows them to focus on the risks associated with their specific assets and functions. The Water Grid Risk Management Plan seeks to leverage off this inherent risk mitigation strategy.

As each entity is an integral part of a single supply chain, a particular focus of the Water Grid Risk Management Plan is on the handover points in this supply chain, and the risks that may cause a whole-of-grid impact.

We are working in close collaboration with the Grid Manager on the issue of risk management under the umbrella of the SEQ Water Grid Risk Resilience Framework. This will incorporate a risk management process, emergency response, business continuity and asset security planning.

### Seqwater Context

The risk management procedure is designed to ensure that all potential enterprise, operational and project levels are regularly identified, assessed, evaluated and treated to ensure that they are managed with appropriate risk mitigation strategies and reported to management, the Executive Leadership and the Board accordingly.

### **Enterprise (Strategic) Risk**

These following categories have been incorporated into the Enterprise Risk Register and will be used as the basis for our enterprise risks:

- People
- Water (Quality and Quantity)
- Assets
- Security (Physical and Natural Disaster)
- Governance (including financial, compliance and fraud)
- Reputation
- Business Continuity
- Emergency and Incident Response
- Public Safety



### **Operational Risk** considers:

- Organisation structure and culture
- Geographics/demographics
- The identity and nature of interaction with key stakeholders
- Operational plan objectives

For each of the areas identified above, there will be legal and regulatory requirements applicable to us. These are identified and taken into account in establishing, implementing and maintaining the risk registers triggered by this procedure.

We will undertake this approach across the enterprise, operational and site levels of the organisation through consistent process and tools. This approach also establishes the context of the risk specific to us. This context has been adopted and enhanced to cater for the needs of Seqwater and outlines the functions or type of risks that may impact on Seqwater's objectives.

**Project Risks** relates to the risks which may impact on the attainment of project deliverables and is managed in accordance with our Project Management Methodologies. These risks are specific to each project and therefore may be unique between projects. However, the risk management procedure supports the management of these risks.

Water Quality Risks relates to the potential for poor water quality being produced which results in aesthetic or health related issues. In addition, regulatory requirements determine the thresholds we must satisfy to ensure quality water supply to our customers.

As a result, details of risks undertaken against the Australian Water Drinking Guidelines (AWDG) are contained within each of our AWDG Management Plans.

Site Risks relate to those risks and opportunities that exist at an individual site.

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### Identify risks

### **Aim**

The aim of risk identification is to develop a comprehensive list of sources of risks and events that might have an impact on the achievement of objectives, as identified in **①** 'Establish the context'. Unidentified risks can pose a major threat to the organisation or result in significant opportunities being missed.

### **Risk Identification Techniques**

- Possible approaches to identifying risks include the following:
- Team-based brainstorming via facilitated workshops
- Structured techniques such as flowcharting, system design review, systems analysis
- Hazard and Operability (HAZOP) studies and operational modelling
- · Scenario and 'what-if' analysis
- Recovering from incidents and emergencies

Ideally, a combination of approaches should be used to maximise risk capture

### **Understanding Our Risks**

In addressing the risk areas identified in '**©** Establish the context', the following questions are a guide for examining risks and their components.

What is the source of the risk?

- What might happen that could:
  - Increase or decrease the effective achievement of objectives
  - Make the achievement of the objectives more or less efficient (financial, people, time)
  - Cause stakeholders to take action that may influence the achievement of objectives
  - Produce additional benefits
- What would be the effect on objectives?
- When, where, why and how are these risks likely to occur?
- Who might be involved or impacted?
- What controls presently exist to treat this risk?
- What could cause the control not to have the desired effect on the risk?

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### **Information Sources**

The following are useful sources of information for both suggesting risks that need to be addressed, and for providing detail on the nature of risks and appropriate treatments:

- · Local and overseas experience
- Expert judgement
- Focus group discussions
- Personal experience or past organisational experience
- Surveys and questionnaires
- Management and Board minutes
- Management interviews and workshops
- Results and reports from audits, inspections and site visits
- Checklists
- Historical records, incident databases and analysis of failures and previous Risk Registers if they exist
- · Insurance claim reports
- Incident debriefings and Post-Incident Reports
- Annual reports



### 6 Analyse risks

### **Aim**

The aim of risk analysis is to provide a simple indicative rating of the severity of a risk, and by extension the urgency of treating it effectively. The process to be used across Seqwater to determine the severity of a risk will be to assess the current risk, that is, the risk in view of the controls that are already in place.

### **Calculating Risk Level**

Risk is simply expressed as a function of its consequences and likelihood.

Risk = Consequence X Likelihood

The process assigns semi-quantative values to consequence and likelihood levels, allowing them to be combined to give the risk rating.

### Likelihood Table

<u>Appendix 1</u> describes the five likelihood levels against specific subject areas such as Environment, Workplace Health and Safety and Water Quality. There is also a generic scale which can be used.

The likelihood has three different criteria to use including description, frequency (time) and probability. Any of these can be used when determining the likelihood against the subject area.

### **Consequence Table**

<u>Appendix 2</u> provides a general description of the five consequence levels with a description for each level of consequence.

Similar to the likelihood table, the consequence table provides criteria against each subject area. By following the level and the subject area, you can determine the rating.

### Risk Rating

Combine the risk consequence and likelihood using the table to determine the risk rating. For example, a moderate consequence and a likelihood of possible results in a rating of High.

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Risk rating matrix

		Likelihood				
		Rare	Unlikely	Possible	Likely	Almost certain
	Catastrophic	Medium	High	High	Extreme	Extreme
	Major	Medium	Medium	High	High	Extreme
	Moderate	Low	Medium	High	High	High
Consequence	Minor	Low	Low	Medium	Medium	High
Conse	Insignificant	Low	Low	Low	Medium	Medium

### **Current Risk with Existing Controls**

To determine current risk, carry out the process to calculate risk level, taking into account the benefits of any controls and treatments currently in place for the risk. The result should be entered into the Risk Register, including detail of the current controls and their effectiveness.

### Risk Register

The Risk Register outlines the foreseeable risks and provides for a set of actions to be taken to both prevent the risk from occurring and reduce the impact of the risk should it eventuate.

The Risk Register template (<u>Appendix 3</u>) must be used by all staff. The risk register will be used for:

- Enterprise risks
- Operational risks:
  - Group level
  - o WH&S
  - Environment
  - Procurement
- Project risks



### Evaluate risks

### Aim

The aim of risk evaluation is to make decisions, based on the outcomes of the risk analysis, about which risks require treatment and to determine treatment priorities.

We follow the 'As Low as Reasonably Practical' (ALARP) model for risk tolerance and prioritisation of treatment, which balances the cost vs. benefit achieved by mitigation treatments.

### **Escalation and Notification – Sequater**

Risk rating	Response
Extreme	<ul> <li>Urgent treatment essential—prioritise as per risk rating</li> <li>Notify relevant Executive General Manager who will notify CEO</li> <li>Notify Principal Risk Advisor</li> <li>Notify Water Grid Manager for event based risks</li> <li>ELT to determine whether risk is further escalated to the Risk Officers' Committee (ROC)</li> <li>Incorporate into Priority Risks report for Board</li> </ul>
High	<ul> <li>Urgent treatment required—prioritise as per risk rating</li> </ul>
Medium	Treatment required—prioritise as per risk rating
Low	<ul> <li>No treatment required—risk managed within normal operations</li> <li>or</li> <li>Minor treatment desirable—prioritise as per risk rating numerical value</li> </ul>

Where risk rating scores are equal, the higher priority will always be allocated to the risk that will cause death or injury.

### Escalation and Notification - SEQ Water Grid Manager

There are two types of risk that must be notified to the Water Grid Manager's Risk Manager:

Type of risk	Role
'Extreme' risk rating for current risk that impacts an individual Grid Participant (Seqwater)	<ul> <li>Monitor and review progress and effectiveness of mitigation treatment</li> <li>Assist as appropriate</li> </ul>
'High' or 'extreme' risk that (potentially) impacts whole- of-Grid (Water Grid Manager)	<ul> <li>Add risk to whole-of-Grid Risk Register if determined as girdwide risk</li> <li>Develop and implement whole-of-Grid mitigation treatment</li> <li>Notify risk to other (potentially) impacted Grid Participants for inclusion in their own Risk Registers</li> </ul>



### **Treat Risks**

### **Aim**

Risk treatment involves:

- Identifying the range of options for treating risks
- · Assessing those options
- Seeking budget approval (where necessary)
- Preparing Risk Action Plans and implementing them

### **Assignment and Review Requirements**

In accordance with the SEQ Water Grid Risk Management Plan (Risk Resilience) Framework and the Seqwater Risk Management System, the following requirements apply to all risk treatments:

- Short-term risk controls are to be clearly assigned to responsible entities or Grid Participants.
- Longer term preventative controls involving investment and capital expenditure are to be formally risk assessed and provided to the Executive Leadership Team for comment on the Segwater implications.
- Handover responsibilities and the risks associated at handover and critical control
  points are to be jointly assessed by the interested parties and assigned to a
  responsible party for control. Operating protocols are to outline the responsible party,
  and each party is to articulate these responsibilities in their risk management plan.
  The Water Grid Manager is to ratify the operating protocol prior to sign-off by the
  Rules Administrator.
- Major capital investment and preventative maintenance approvals are to be risk assessed for whole-of-Grid impact.
- Whole-of-Seqwater risks are to be reviewed and responsibility assigned by the Executive Leadership Team.
- The SEQ Water Grid has established a Risk Officers' Committee (ROC) to review grid-wide risks and responsibility assigned to the CEO Working Party.

### **Treatment Options**

Treatment options include:

- Avoidance by:
  - o not proceeding with an activity that entails risk
  - removing the aspect of the activity that is the source of risk
  - o finding another way to achieve the same outcome
- Transferring some or all of the risk—normally done by contracting out the activity or through insurance
- Reducing either the likelihood or consequence of an adverse event (as result of a successful risk action plan)
- · Acceptance or retention of the risk, either with or without risk financing

The appropriate option should be chosen based on feasibility, cost-benefit analysis and the type of risk consequence.

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### **Treatment Hierarchy**

In accordance with the Seqwater Risk Management System, the following hierarchy of controls is to be implemented for health, safety, environmental and community risks:

- Eliminate hazard source—this is the best option if practical
- Substitute the hazard source with one less hazardous
- Engineering control—redesign, erect physical barriers, enclose, isolate
- System controls—Safe Work Procedures, Work Permits, warning devices and training
- Use personal protective equipment—placing a last line barrier between the person and the hazard

Zwar Breseg	Do not proceed with the activity or choose an alternative approach to achieve the same outcome.
	Reduce the likelihood - improving management controls and procedures.
Mittgate	Reduce the consequence - putting in place strategies to minimise adverse consequences, e.g. contingency planning, Business Continuity Plan, liability cover in contracts.
Tirensferthe risk	Shifting responsibility for a risk to another party by contract or insurance. Can be transferred as a whole or shared.
	Controls are deemed appropriate. These must be monitored and contingency plans developed where appropriate.

### **Risk Action Plans**

A Risk Action Plan is to be developed for each risk identified at **②** 'Evaluate risks' as requiring treatment.

Plans should include the following basic elements:

- Scope
- Responsibilities
- Cost
- Time
- Resources
- Expected outcomes
- Treatment option implementation approach, including some or all of:
  - People controls
  - Process controls
  - Systems controls
  - o Assets controls
- Performance evaluation



### **Review Triggers**

Risk Action Plans are to be reviewed at least quarterly or when one of the following occurs:

- Whenever there has been a change in the threat or strategic context (e.g. impending natural disaster, raised alert level for terrorism threat)
- Whenever enhancements have been identified during the normal course of business
- Whenever new equipment or assets affecting the risk are brought into the Water Grid
- As a part of the organisational strategic planning process
- · Following an incident/issue, to incorporate any lessons learnt
- Whenever any lessons have been learnt from other sources (i.e. mock emergencies or internal training exercises)

### **Expected Outcomes—Calculate Targeted Risk Level**

To determine whether the treatment chosen is sufficient to reduce a risk to an acceptable rating, recalculate the risk level following the process outlined in '□ Analyse risks', taking the benefits of the planned treatment into account when gauging the consequences and likelihood. The resultant risk rating should be recorded in the Risk Register as the 'targeted risk rating'.

Once the result is know, further consideration is given to respond to the risk rating which may include further mitigation strategies to be undertaken or where the risk rating is Medium or Low, whether a risk remains is determined on the strength of the existing operational controls and monitoring processes.

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### **6** Continuous Activities

The following areas of activity should occur continuously throughout our risk management system:

- Communicate and consult
- Monitor and review

### **Communicate and Consult**

### Aim

The aim of appropriate communication and consultation is to:

- Improve people's understanding of risks and the risk management process
- Ensure that the varied views of stakeholders are considered
- Ensure that all participants are aware of their roles and responsibilities

### Stakeholder identification

Stakeholders with whom it may be appropriate to communicate and consult with are listed below. All communication to external stakeholders is to be made through the SEQ Water Grid Manager via our Communications Manager.

- Core relevant stakeholders:
  - Seqwater Board
  - Seqwater Executive General Managers
  - Seqwater Principal Risk Advisor
  - o Water Grid Manager
  - Water Grid Manager Risk Manager
  - o Risk Officer Committee
  - Water Grid CEO Group
- Other internal and external stakeholders:
  - Relevant Board/s
  - Responsible Minister/s and other local members whose electorates may be affected by activities or associated employment or other opportunities
  - Senior executives and managers of business units who may be affected by the organisational activities
  - Staff, their families, unions and other representative organisations
  - The media
  - o Legislators and regulators
  - People who may be affected by the organisation or its activities
  - The environment and the community, as general proxy stakeholders
  - Special interest groups, such as environmental lobby groups
  - Contractors and suppliers
  - Emergency services organisations
  - Financial institutions and other providers of private sector funding



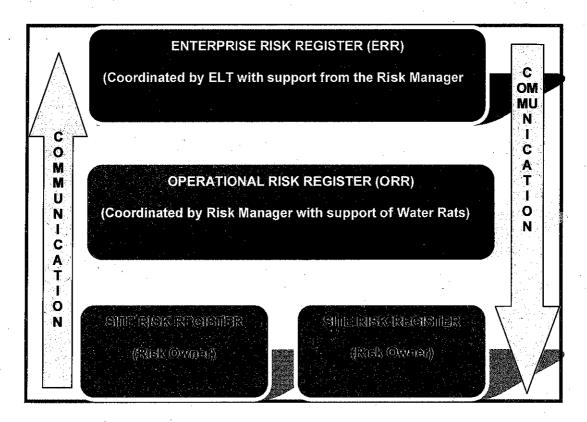
### **Monitor and Review**

### Aim

The aim of monitoring and review across the risk management process are to ensure:

- Progress is made against Risk Action Plans
- Risk Action Plans achieve the required risk reduction
- Risk assessments and risk ratings remain valid given changes in circumstances
- The risk management process continues to be appropriate

Seqwater will monitor the currency and effectiveness of the risk management processes. The following diagram illustrates the communication flow up and down the organisation with reference to Risk Registers



Risk are reported through the following mechanisms:

- Board Reporting
  - On a monthly basis, the priority risks are provided to the Board outlying risks which may impact us in the short to medium term
  - o On a quarterly basis, variations of Enterprise risks are provided to the Board
  - On an annual basis, the Board reviews the Enterprise Risk Register
- Risk Assessment Team (Water Rats)
  - On monthly basis the Risk Assessment Team develops initiatives to improve the risk culture of Seqwater
- Executive Leadership Team:
  - A quarterly (or more frequently when directed) report to include:
    - Emerging risks
    - Update on Enterprise and Operational Risk Register(s)

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### Verification

Compliance with this procedure may be verified by management reviews and internal audit.

### Referenced Information

The following are the principal references for the preparation of this procedure.

- POL-00013 Corporate Risk Management Policy
- MAN-00005 Corporate IMS Integrated Management System Corporate Manual
- REG-00058 Corporate Environmental Risk Assessment and Register
- REG-00152 Corporate Enterprise Risk Register
- TEM-00022 Corporate Safety WHS Risk Register Safety Action Plan Template
- LEG-00025 Water Act 2000 (Qld)
- LEG-00003 Workplace Health and Safety Act 1995 (Qld)
- LEG-00001 Environmental Protection Act 1994 (QLD)
- ISO 31010:2009: Risk Assessment
- HB205:2004: OHS Risk Assessment Handbook
- HB203:2006: Environmental Risk
- Australian Drinking Water Guidelines 6 Section 3.2.3 regarding Hazard Identification and Risk Assessment
- Queensland State of the Environment Report 2007 for the principal environmental indicator headings
- ISO9001:2000: Quality Management System requirements Section 7 in relation to product realisation planning
- ISO14001:2004 Environmental Management System requirements Section 4.3.1 (Environmental Aspects) and 4.3.2 (Legal and Other Requirements)
- AS4801:2001: OHS Management System Requirements Sections 4.3.1 (Identification of Hazards) and 4.3.2 (Legal and Other Requirements)
- ISO22000:2005: Food Safety Management Systems Section 7 (Planning and Realisation of Safe Products)
- Queensland Water Grid Manager Emergency Plan for categories and description of consequences
- Global Reporting Initiative for Risk categories consistent with a sustainability agenda
- Risk Management Policy and procedures (Final v2\_2109729) prepared by KPMG for Segwater

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### **Definitions**

For this procedure, the following definitions apply:

- Consequence: Outcome or impact of an event.
- **Control:** An existing process, policy, device, practice or other action that acts to minimise negative risk or enhance opportunities.
- Environmental Aspect: element of an organisation's activities or products or services that can interact with the environment. A significant environmental aspect has or can have a significant environmental impact.
- Environmental Impact: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
- HACCP: Hazard Analysis and Critical Control Point (ISO22000 requirements for a food safety management system in the food chain where an organisation needs to demonstrate its ability to control food safety hazards in order to ensure safe products).
- Hazard: A source or a situation with a potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.
- Likelihood: Used as a general description of probability or frequency.
- **Procedure:** A specified way to carry out an activity or a process.
- Residual Risk: Risk remaining after implementation of risk treatment.
- **Risk:** The likelihood and consequence of defined eventualities. Risk can include governance, quality, safety, environmental, economic and social dimensions. Risk may have beneficial or adverse consequences.
- Risk Assessment: The overall process of estimating the magnitude of risk to aid in deciding what actions will be taken.
- Risk Assessment Team: A group of representatives of business areas who build risk awareness and risk consciousness within Seqwater through monitoring and improving risk management processes.
- Risk Fix: An action that results in improving control effectiveness and reducing risk.
- Risk Owner: An individual who has delegated area of responsibility in which risk
  impacts on the objectives of that area of responsibility.
- Risk Score: The level or rating assigned to a particular risk.
- Risk Score Matrix: A tool to determine the risk score based on likelihood and consequence factors.
- **Significance:** A Significant risk is one with a risk ranking at or above a level determined by Seqwater to be significant.
- Sustainability: The social, environmental, economic and governance dimensions of the entity's policies and actions that determine its viability as a sustainable organisation.
- People Risk relates to risks associated with our people. Examples include capacity, capability, culture, WH&S. Mitigations include attraction and retention strategies, cultural, learning and development, remuneration, reward and recognition.
- Assets Risk relates to our natural assets (catchments) and built assets (WTP, Dams etc...) and the potential impact they may have on water quantity and water quality.



Examples include asset failure, environmental damage, Capex and asset maintenance risks.

- Water Quality Risk relates to the 2004 Australian Drinking Water Guidelines
   (ADWG) developed by the National Health and Medical Research Council (NHMRC)
   in collaboration with the Natural Resource Management Ministerial Council
   (NRMMC). The ADWG incorporates the "Framework for the Management of Drinking
   Water Quality" and provides the Australian community and the water supply industry
   with guidance on what constitutes good quality drinking water. The current version
   includes Chapter 8: Drinking Water Treatment Chemicals.
- Water Quantity Risk relates to the supply of water (quantity) for SEQ Water Grid
  assets (connected) and non-water grid assets (non-connected). Examples include
  loss of supply (drought) for smaller communities and potential asset failure for larger
  assets.
- Physical Security (Natural and Physical Events) relates to the physical security of our assets and our ability to respond to natural disasters. Current examples relate to failure to deliver water as a result of security threats, natural events and inability to recover from any disasters.
- Governance Risk relates to our effective decision making and incorporates audit, risk, compliance, commercial, financial, fraud. Examples include a lack of processes to provide assurances to our stakeholders.
- Reputation Risk relates to risks which may impact our reputation with our customers, stakeholders and/or industry. Any such risk can result in a lack of confidence in our abilities to deliver water.
- Public Safety Risk relates to events that may impact the public. Potential risks
  include public access to Seqwater sites for the purposes of recreation. Examples
  include water accidents (i.e. power boats) and drowning.
- Environmental Risk relates to entities operating in Queensland. The Queensland
  State of the Environment Report identifies and reports on the environmental issues
  relevant to the managing of the Queensland Environment. It identifies the
  environmental risks Seqwater will assess for relevance and significance.
- Workplace Health & Safety risk applies to the people working for or on its behalf, their well being and the well being of the community that utilises the organisational assets. Seqwater will identify and assess its potentially significant safety risks through a process of inspections and consultation. From this site information, a corporate and site safety risk profile is developed.
- Sustainability risk applies to an entity seeking to progress a sustainability agenda.
   Seqwater incorporates governance, economic, social and environmental considerations into its risk framework.
- Grid-wide risk applies to Seqwater's role in the South East Queensland Water Grid.
   There is a requirement to ensure water supply chain risks are managed. This requires contribution from each grid participant and is coordinated by the Water Grid Manager.



# Appendix 1: Risk Likelihood Table

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	Water Quality	There is limited or no monitoring	data available and the processes	are not well understood or occur	more often than once a week (52/vr).		There is limited monitoring data	available and there is a	reasonable understanding of the	processes involved or occurs more	often than once a month (12/yr)	and up to once a week (52/yr)							
ikelihood Description	Environment	Record of occurrence within Seqwater	within last 12 months at a defined	environmental consequence nigner	than mouerate or above of occurs > 10 times per year or has a >90%	probability of occurring.	Record of occurrence within Seqwater	between last 12 months and 24	months at a defined environmental	consequence of moderate or above or	for all activities subject to an issued	alert (including a product, discipline,	regulator, industry, water grid or	seqwater notification), likelihood will	be assess as "likely" for 6 months	unless there is evidence to the	contrary. Alternatively, the event	occurs once per year or has a >75% -	90% probability of occurring.
Likelihood [	Workplace Health and Safety	Very High <b>likelihood</b> of the r <b>isk</b>	happening in related operating	environment. Would be surprising it	traid not riappen of occurs > 10 times a year or has a >90%	probability of occurring.	High likelihood of the risk happening	in related operating environment.	Has occurred recently or occurs once	per year or has a 75% - 90%	probability of occurring.								
	General - ISO 31010	There is evidence or	certainty that this will	eventuate; or occurs	once a year or has a > 80% probability of	occurring.	The threat exists and it	indicates high probability	of occurrence; or occurs	once every 1 - 5 years; or	has a 20% to 80%	probability of occurring.							
		5	Almost	certain			4	Likelv											

Seqwater Water

•	
Water Quality	There is at least a year of continuous monitoring data available, which has been assessed and there is a good understanding of the processes involved or occurs more often than once a year (1/yr) up to once per month(12/yr)
elihood Description Safety Environment	Record of occurrence within Seqwater between last 36 months at a defined environmental consequence lower than moderate or record of occurrence within Seqwater between 24 and 36 months ago at a defined environment consequence of moderate or above. For all activities, likelihood will be assessed possible for the first 6 months unless there is evidence to the contrary.  Alternatively, the event occurs once per year or has a >50% - 75% probability of occurring.
Likelihood [ Workplace Health and Safety	Probably could occur in related operating environment. Likelihood of occurrence is increased due to limit of treatment. History of occurrence with the defined consequence level within Seqwater or occurs once every 5 to 10 years or has a 50% to 75% probability of occurring.
General - ISO 31010	The threat exists but the history of expectation of this type of situation indicates occurrence is moderately possible or occurs once every 5 to 20 years or has a 5% to 20% probability of occurring.
	3 Possible

Seqwater service

		Likelihood	kelihood Description	
	General - ISO 31010	Workplace Health and Safety	Environment	Water Quality
2	A slight threat is	Has occurred sometime in related	No record of occurrence within the	There is 5 years of continuous
Unlikely	perceived from this source but the situation	operating environment with the defined consequence	last 36 montns at any environmental consequence level or a record of	monitoring data, which has been collated and assessed, with at
	is unlikely to occur or is	have been experienced. Would not	occurrence within Seqwater between	least weekly monitoring or for the
	likely to occur once every	be surprising if it occurred or occurs	36 and 60 months ago at any	duration of seasonal events.
	20 to 100 years or has a	once every 11 to 50 years or has a	environmental consequence level.	There is a good understanding of
	occurring.	-2.7% to 5.7% bi consumity of occur6.	every 11 to 50 years or has a 25% -	more often than every 5 years and
	)		50% probability of occurring.	up to once a year
-	No perceived threat from	Could occur with the stated	No record of occurrence within	There is 5 years of continuous
Rare	this source of risk or	consequence in related operating	Seqwater within last 60 months at any	monitoring data, which has been
	occurs once every 100	environment but it is considered	environmental consequence level or	trended and assessed, with at
	years or has a >1%	unlikely. Causal events have	occurs	least daily monitoring. The
	probability from	occurred but effects have been		processes involved are thoroughly
	occurring.	treated so that the defined		understood or occurs less than or
		consequence has not resulted. No		equal to once every 5 years
		history of a loss situation which		•
		results in the possible consequence		
		level defined in related operating		
		environment or occurs between		
		once every 51 to 100 years or has a		
		10% to 25% probability of occurring.		



Seqwater Seqwater

# Appendix 2: Risk Consequence Table

-		
	Workplace Heaith & Safety	A single fatality or permanent impairment to one or more persons.
d safety	Public safety	A single fatality or permanent impairment to one or more persons.
public health an	Water Quantity	Widespread regional loss of water supply to customer > 48 hours
Customer Service and public health and safety	Drinking Water Quality	Potential acute health impact, declared outbreak expected
	Environment	Significant     Environment     al breach     resulting     from     prosecution     caused by     Seqwater     actions or     lack of action.     Total loss of     eco-system     services     function     (riparian     zone,     assimilative     capacity)     Complete     loss of value     to other     regional     assets
	Reputation	Sustained and widespread concerns expressed by public and/or all levels of Government leading to a loss of trust and confidence in participant/s impacting whole of water grid operations.
	Legal and regulatory	Actions resulting from an impact on the public and/or our assets:  • the public bringing class action • major cost implications unable to be met by the organisation. • major breach of Grid Contract, regulatory or common law obligations that impacts on a region/suburb of the South East Queensland community.
	Business continuity	>1 week outage Limited work arounds
	Project Risks	>90% of project value
	Economic	Unplanned balance sheet effect (increase in debt) of >\$30M
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Seqwater water

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	Workplace Health & Safety	Hospital admission required
safety	Public safety	Hospital admission required
public health and	Water Quantity	Loss of water supply to customer over multiple suburbs > 48 hrs
Customer Service and public health and safety	Drinking Water Quality	Potential acute health impact, no declared outbreak expected
	Environment	Major     Environment     al breach     resulting     from     prosecution     caused by     Seqwater     actions or     lack of action.      Major loss of     eco-system     services     function     (riparian     zone,     assimilative     capacity)     Major loss of     value to     other     regional     assets
	Reputation	Concerns expressed at a national level by public and loss of trust and confidence in Water Grid operations on a particular issue.
	Legal and regulatory	Actions resulting from an impact on the public and/or our assets:  • the public bringing legal action (not a class action)  • regulator imposing maximum statutory penalty  • major cost implications that the organisation will need to seek additional funding to meet  • major breach of Grid Contract, regulatory or common law obligations that impacts on a individual / discrete organisation of the South East Queensland community.
	<b>B</b> usiness continuity	3 – 5 Days Some work arounds
	Project Risks	50 – 90% of project value
	Economic	Unplanned balance sheet effect (increase in debt) of \$10M - \$30M
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Seqwater water

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Workplace Health & Safety	Serious Bodily Injury or Dangerous Event
l safety Public safety	Serious Bodilly Injury or Dangerous Event
public health and Water Quantity	Loss of water supply to customer over an entire suburb for > 24 hrs
Customer Service and public health and safety Drinking Water Quality Water Public	Widespread aesthetic impact for SEQ Water Grid plants Repeated breach of guideline value/specification in annual Water Quality report for chronic health parameters
Environment	Moderate     Environment     al breach     resulting     from     prosecution     caused by     Seqwater     actions or     lack of action.     Partial loss of     eco-system     services     function     (riparian     zone,     assimilative     capacity)     Moderate     loss of value     to other     regional     assets
Reputation	Concerns expressed at a regional level by public and loss of trust and confidence in Water Grid operations on a particular issue (non life threatening)
Legal and regulatory	Action results from commercial loss:  • regulator imposing a moderate statutory penalty • moderate cost implications able to be absorbed by the organisation • breach of Grid Contract, regulatory or common law obligations that: • also includes a deliberate breach of a procedural Grid Contract or regulatory obligation.
Business continuity	1 – 3 Days
Project Risks	20 – 50% of project value
Economic	Unplanned balance sheet effect (increase in debt) of \$5M - \$10M
level	തിങ്ങള് <b>ഷ്</b>

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# Corporate Legal & Risk – Procedure Risk Management

Seqwater Seqwater

Workplace Health & Safety	Medical treatment (doctor or medical facility).
l safety Public safety	Medical treatment (doctor or medical facility).
oublic health and Water Quantity	Local loss of water supply to customer for > 8 hrs
Customer Service and public health and safety Drinking Water Quality Water Public	Operational disruption Localised aesthetic impact for non-SEQ Water Grid plants Isolated sample reports above guideline value/specification for chronic health parameters
Environment	Fines     imposed as a     result of     environment     al breach     Isolated     disruption of     eco-system     services     function     (riparian     zone,     assimilative     capacity)     Minimal Loss     of value to     other     regional     assets
Reputation	Public undecided but accepting of information/decisions.
Legal and regulatory	Regulator imposing a low statutory penalty. Low cost implications for the organisation. Moderate, non-deliberate, breach of procedural Grid Contract or regulatory obligations.
Business continuity	1 Day
Project Risks	5 – 20% of project value
Economic	Unplanned balance sheet effect (increase in debt) of \$0.5M – \$5M
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# Corporate Legal & Risk - Procedure Risk Management

**Seqwater** 

	Workplace Health & Safety	Illness or injury (first aid treatment only).
l safety	Public safety	Illness or injury (first aid treatment only).
public health and	Water Quantity	Local loss of water supply to customer for < 8hrs
Customer Service and public health and safety	Drinking Water Quality	Little or no disruption to normal operation
	Environment	Non-     compliance     to     environment     al obligations.     Little or no     disruption to     eco-system     services     function     (riparian     zone,     assimilative     capacity)     Loss of value     to other     regional     assets
	Reputation	Lack of public interest,
	Legal and regulatory	Minor, non-deliberate, breach of procedural Grid Contract or regulatory obligations. Little to no cost implications for the organisation.
	Business continuity	< 4 hours
į	Project Risks	c5% of project value
	Economic	Unplanned balance sheet effect (increase in debt) of up to < \$0.5M
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# Corporate Legal & Risk – Procedure Risk Management

Appendix 3: Risk Register Template

Refer to TEM-00034

### 8 February 2012

Justice Catherine E Holmes Commissioner of Inquiry Queensland Floods Commission of Inquiry Level 30 400 George Street Brisbane QLD 4000

By Email:

ABN 47 702 595 758

Level 31

Riverside Centre
123 Eagle Street

Brisbane QLD 4000

Australiä

Correspondence
PO Box 7082
Riverside Centre
Brisbane QLD 4001
Australia
DX 210 Brisbane
www.aar.com.au

**Dear Justice Holmes** 

### Seqwater

## Requirement to Provide Information to Peter Borrows dated 7 February 2012

We refer to the Commission's requirement to provide information dated 7 February 2012 issued to Peter Borrows (*Requirement*) which required the provision of documents evidencing:

- 1. the systems and procedures relevant to:
  - (a) the provision of information to the chief executive officer and the board about the management of Wivenhoe and Somerset dams during the flood events that occurred in the 2010/2011 wet season;
  - (b) the review of the flood mitigation manual for Wivenhoe and Somerset dams and its submission to the Department of Environment and Resource Management for approval under the Water Supply (Safety and Reliability) Act 2008 (Qld), which resulted in Revision 7 of the Manual;
  - (c) the creation of the flood event reports following flood events at Wivenhoe and Somerset dams that occurred in 2010/2011 wet season;
- 2. how those systems and procedures were developed, including:
  - (a) external advice obtained;
  - (b) who approved them before implementation;
  - (c) what role, if any, the chief executive officer and the board played in that development;
- 3. how those systems are tested and reviewed, including:
  - (a) how often testing is completed;
  - (b) who completes the tests;

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- (c) any external or internal review or audit of those systems or procedures or tests of them;
- 4. any breaches of those systems and procedures identified by Segwater;
- 5. any weaknesses identified in those systems and procedures, and any action taken by Segwater to address those weaknesses;
- 6. a list of risk management frameworks adopted by Seqwater (for example, an Australian Standard) relevant to topics 1(a) to 1(c).

We refer to each of our correspondence enclosing documents relevant to the Requirement delivered at about midday and 4 pm today.

Continuing searches by our client have identified one additional document relevant to the Requirement (see *attached*).

Any additional documents identified will be forwarded to the Commission by way of supplement.

Yours faithfully



Michael llott
Partner
Michael.llott@aar.com.au
T + 61 7 3334 3234

Encl.



Your ref:

09-000159/001

Contact Name: Kali Astill Telephone:

SunWater Limited PO Box 15536 City East Brisbane Queensland 4002 www.sunwater.com.au ACN 131 034 985

2 9 DEC **20**10

24 December 2010

Jane Whipps
Principal Legal Adviser
Seqwater
PO Box 16146
CITY EAST QLD 4002

Dear Jane

Deed of Variation and Extension of the Service Level Agreement – Flood Management Services

Please find **attached** one copy of the above Deed of Variation and Extension No.3 duly executed by SunWater and dated 24 December 2010.

Yours sincerely

Kali Astill LAWYER

Enc.

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**DEED OF VARIATION AND EXTENSION No. 3** 



### TABLE OF CONTENTS

1	Interpretation	1
2	Variation	1
3	Term	. 1
4	Confirmation	1
5	General	2
6	Governing Law	2
Sal	phodulo 1	3

### Deed of Variation and Extension No. 3

Date:

24+

day of December 2010

**Parties** 

Between

QUEENSLAND BULK WATER SUPPLY AUTHORITY trading as SEQWATER ABN 75 450 239 876 of 240 Margaret Street, Brisbane, Queensland, 4000 ('Segwater')

and

**SUNWATER LIMITED** ACN 131 034 985 of 179 Turbot Street, Brisbane, Queensland, 4000 ('SunWater')

### Recitals

- 1. Seqwater and SunWater were parties to a Service Level Agreement Flood Management Services Agreement dated 13 October 2009 ("the Agreement").
- 2. In July 2009, the Agreement was varied by a Deed of Variation and Extension dated 29 July 2010 ("**Deed of Variation and Extension No.1**") which extended the expiry date of the Agreement from 30 June 2010 to 31 July 2010.
- 3. In September 2010 the Agreement was varied by a second Deed of Variation and Extension dated 30 September 2010 ("Deed of Variation and Extension No.2") which extended the expiry date of the Agreement from 31 July 2010 to 31 October 2010.
- 4. Seqwater and SunWater have agreed to further vary the expiry date of the Agreement in accordance with the terms of this Deed.

### The parties agree as follows:

### 1 Interpretation

Words and phrases defined in the Agreement and the Deed of Variation and Extension have the same meaning when used in this Deed.

### 2 Variation

The parties agree that on and from the date of this Deed, the Agreement is varied in the manner set out in Schedule 1.

### 3 Term

The parties acknowledge and agree that the Initial Period (as that phrase is defined in the Agreement and extended by Deed of Variation and Extension No.1 and Deed of Variation and Extension No.2) is extended for a further four (4) calendar months from 31 October 2010 to 28 February 2011.

### 4 Confirmation

The parties agree that the Agreement, as amended by the Deed of Variation and Extension and this Deed, continues to be in full force and effect.

Each party is responsible for its own costs associated with this Deed.

### 6 Governing Law

This Deed is governed by the law in force in the State of Queensland.

Evac	utod	20	2	Deed
r xec:	пеа	as	н	11660

Signed on behalf of QUEENSLAND BULK WATER SUPPLY AUTHORITY ABN 75 450 239 876 by its duly authorised representative  Signature of witness  BROOKE FOXOUER  Name of witness (print)	Signature of authorised representative  JID (1055)  Name of authorised representative (print)  CENERAL MANAGER  Office held
14 December 2010 ← Date (print)	
Signed for SUNWATER LIMITED ACN 131 034 985 by an authorised officer in the presence of	← Signature of officer
Signature of witness	Name of officer (print)
Name of witness (print)	Office held
Dide (print)	

Signed on behalf of SunWater Limited ACN 131 034 985 by the Chief Executive Officer under Power of Attorney No. 711767649 who warrants that the Power of Attorney is valid and has not been revoked.



Witness Name: Lesleigh Birrer

### Schedule 1

1. Clause 2.1 of the Agreement and as amended by Deed of Variation and Extension No.1 and Deed of Variation and Extension No.2

Delete "31 October 2010" and replace with "28 February 2011"

### 9 February 2012

Justice Catherine E Holmes Commissioner of Inquiry Queensland Floods Commission of Inquiry Level 30 400 George Street Brisbane QLD 4000

By Email:

ABN 47 702 595 758

Level 31

Riverside Centre
123 Eagle Street
Brisbane QLD 4000

Australia

Correspondence
PO Box 7082
Riverside Centre
Brisbane QLD 4001
Australia
DX 210 Brisbane
www.aar.com.au

**Dear Justice Holmes** 

### Seqwater

## Requirement to Provide Information to Peter Borrows dated 7 February 2012

We refer to the Commission's requirement to provide information dated 7 February 2012 issued to Peter Borrows (*Requirement*) which required the provision of documents evidencing:

- the systems and procedures relevant to:
  - the provision of information to the chief executive officer and the board about the management of Wivenhoe and Somerset dams during the flood events that occurred in the 2010/2011 wet season;
  - (b) the review of the flood mitigation manual for Wivenhoe and Somerset dams and its submission to the Department of Environment and Resource Management for approval under the Water Supply (Safety and Reliability) Act 2008 (Qld), which resulted in Revision 7 of the Manual;
  - (c) the creation of the flood event reports following flood events at Wivenhoe and Somerset dams that occurred in 2010/2011 wet season;
- 2. how those systems and procedures were developed, including:
  - (a) external advice obtained;
  - (b) who approved them before implementation;
  - (c) what role, if any, the chief executive officer and the board played in that development;
- 3. how/those systems are tested and reviewed, including:
  - (a) how often testing is completed;

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- (b) who completes the tests;
- (c) any external or internal review or audit of those systems or procedures or tests of them;
- 4. any breaches of those systems and procedures identified by Seqwater;
- 5. any weaknesses identified in those systems and procedures, and any action taken by Seqwater to address those weaknesses;
- 6. a list of risk management frameworks adopted by Seqwater (for example, an Australian Standard) relevant to topics 1(a) to 1(c).

We refer to our correspondence enclosing documents relevant to the Requirement:

- (a) delivered at about midday, 8 February 2011;
- (b) delivered at about 4 pm, 8 February 2011; and
- (c) emailed at 7.01 pm, 8 February 2012.

Continuing searches by our client have identified one additional document relevant to the Requirement (see *attached*). We note that the document is identified as "BM4(b)" to the Statement of Barton Maher dated 1 April 2011.

Any additional documents identified will be forwarded to the Commission by way of supplement.

Yours faithfully

£

Michael llott

Partner

Michael.llott@aar.com.au T + 61 7 3334 3234

Encl.



# FLOOD PROCEDURE MANUAL

WIVENHOE DAM
SOMERSET DAM
NORTH PINE DAM
LESLIE HARRISON DAM
UNCONTROLLED SPILLWAY DAMS

**Uncontrolled Copy** 

Revision 0 January 2010



### **REVISION STATUS**

Revision No.	Date	Amendment Details
0	January 2010	



### **DISTRIBUTION LIST**

Agency	Responsible Person	Location
Seqwater	Dam and Source Operations Manager	Margaret Street, Brisbane
Seqwater	Principal Engineer Dam Safety	Karalee
Seqwater	Principal Hydrologist	Margaret Street, Brisbane
Seqwater	Operations Coordinator, North	Landers Shute
Seqwater	Operations Coordinator, Central	Wivenhoe Dam
Seqwater	Operations Coordinator, South	Karalee
Seqwater	Storage Supervisor	Leslie Harrison Dam
Seqwater	Storage Supervisor	North Pine Dam
Seqwater	Storage Supervisor	Somerset Dam
Seqwater	Storage Supervisor	Wivenhoe Dam
Seqwater	Senior Flood Operations Engineer	Flood Operations Centre, Brisbane



### **DEFINITIONS**

"Act" means the Water Supply (Safety and Reliability) Act 2008;

"AEP" means annual exceedance probability, the probability of a specified event being exceeded in any year.

"AHD" means Australian Height Datum;

"Chairperson" means the Chairperson of Sequater;

"Close Call" means being able to be contacted at all times and being able to report for duties at a designated site within two hours of being contacted.

"Controlled Document" means a document subject to managerial control over its contents, distribution and storage. It may have legal and contractual implications;

"Dams" means dams to which these procedures apply, that is Wivenhoe Dam, Somerset Dam, North Pine Dam and Leslie Harrison Dam;

"Dam Operator" means a person who has been trained and who is competent to release flood water from a dam and undertake all required Flood Event duties at a dam;

"Dam Supervisor" means the senior on-site officer at a Dam;

"Duty Flood Operations Engineer" outside a flood event means the Flood Operations Engineer currently on close call. During a flood event, means the Flood Operations Engineer currently controlling the Flood Operations Centre.

"EAP" means Emergency Action Plan for a Dam;

"EL" means elevation in metres Australian Height Datum;



"Event Log" means the handwritten log of significant events that is maintained at operational sites during a Flood Event;

"Flood Event" is a situation where the Duty Flood Operations Engineer expects the water level in either of the Dams to exceed the Full Supply Level;

**"Flood Officers"** means personnel who work in the Flood Operations Centre supporting the Flood Operations Engineers;

**"Flood Manuals"** means Manual of Operational Procedures for Flood Mitigation for Wivenhoe Dam and Somerset Dam and the Manual of Operational Procedures for Flood Releases from North Pine Dam;

**"Flood Operations Centre"** means the Centre used during by Flood Operations Engineers to manage Flood Events;

**"Flood Operations Engineer"** means a person designated to direct flood operations at the dams in accordance with the Flood Manuals;

**"Flood Operations Manager"** means a person designated to be responsible for the overall management of the Flood Operations Centre;

"FSL" or "Full Supply Level" means the level of the water surface when the reservoir is at maximum operating level, excluding periods of flood discharge;

"Gauge" when referred to in (m) means river level referenced to AHD, and when referred to in (m<sup>3</sup>/s) means flow rate in cubic metres per second;

"Senior Flood Operations Engineer" means a person designated in accordance with the Flood Manuals;

"Seqwater" means the Queensland Bulk Water Supply Authority trading as Seqwater.



"Significant Event" means any event that relates to water release, dam safety or public safety that occurs during a Flood Event. This includes instructions to dam operators and information provision to individuals and agencies external to Sequater.



### **TABLE OF CONTENTS**

1	Int	roduction1
2	Flo	ood Operations Centre – Staffing Arrangements and Centre Administration 2
	2.1	Preparedness
	2.2	Mobilisation4
	2.3	Normal Operations5
	2.4	Loss of Communications
3	Flo	ood Operations Centre – Flood Model Maintenance and Flood Event Actions 9
	3.1	Preparedness9
	3.2	Mobilisation
	3.3	Normal Operations
	3.4	Loss of Communications
4	Wi	venhoe Dam14
	4.1	Preparedness
	4.2	Mobilisation
	4.3	Normal Operations
	4.4	Loss of Communications
5	Son	merset Dam20
	5.1	Preparedness
	5.2	Mobilisation
	5.3	Normal Operations
	5.4	Loss of Communications
6	No	rth Pine Dam27
	6.1	Preparedness
	6.2	Mobilisation
	6.3	Normal Operations
	6.4	Loss of Communications
7	Les	slie Harrison Dam33
	7.1	Preparedness
	7.2	Mobilisation
	7.3	Normal Operations
	7.4	Loss of Communications



8	Un	controlled Spillway Dams	40
	8.1	Preparedness	40
	8.2	Mobilisation	42
	8.3	Normal Operations	44
9	Flo	od Event Communications Within Seqwater	47
A	PPE	NDICES	
D	am Ste	atus Summary Sheet	A
Se	ample	Flood Event Log	<i>B</i>
Se	ample	Flood Operations Directive	<i>C</i>
W	ivenh	oe Dam - Flood Readiness Checklist	D
Se	omerse	et Dam - Flood Readiness Checklist	<i>E</i>
N	orth P	ine Dam - Flood Readiness Checklist	<i>F</i>

Leslie Harrison Dam - Flood Readiness Checklist...... G

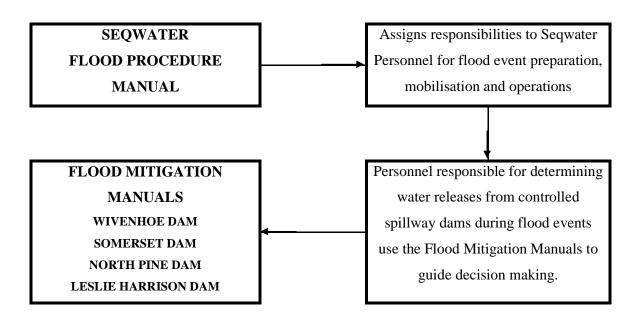


### 1 INTRODUCTION

Given their potential significant impact on downstream populations, it is imperative that Seqwater's dams are operated during flood events in accordance with clearly defined procedures to minimise impacts to life and property. This Manual contains the procedures that describe the responsibilities of Seqwater personnel for flood event preparation, mobilisation and operation, in relation to Seqwater's dams.

For Wivenhoe, Somerset and North Pine Dams, the procedures refer to Flood Mitigation Manuals that have been prepared and gazetted in accordance with the Water Supply Act 2008. These Manuals contain operating principles under which decisions relating to the release of water from these dams during flood events must be made. A Flood Mitigation Manual has also been prepared for Leslie Harrison Dam and although this Manual is yet to be gazetted under the Act, it should still be used as the basis for decision making in relation to the release of water during flood events.

The relationship between this Manual and the Flood Mitigation Manuals for Wivenhoe, Somerset, North Pine and Leslie Harrison Dams is outlined in the diagram below. The Uncontrolled Spillway dams do not have associated Flood Mitigation Manuals as it is not possible to in any way influence flood releases from these dams during flood events.





### 2 FLOOD OPERATIONS CENTRE – STAFFING ARRANGEMENTS AND CENTRE ADMINISTRATION

### 2.1 Preparedness

### **Purpose**

This procedure is used to ensure that the Flood Operations Centre is maintained in a suitable state of preparedness for Flood Events.

### **Scope**

This procedure applies to the maintenance of the Flood Operations Centre for Flood Events. It defines the responsibilities of the Flood Operations Engineers and Flood Officers in ensuring that the Flood Operations Centre is properly maintained.

### Responsibilities

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. This Flood Operations Manager is to ensure that:

- A Flood Operations Engineer and three Flood Officers are on close call and ready to attend the Flood Operations Centre if called. Personnel on close called are termed Duty Flood Operations Engineer and Duty Flood Officer.
- Sufficient Flood Operations Engineers and Flood Officers are available to staff the
  Flood Operations Centre if a Flood Event is declared. A flood event could require 24
  hour staffing of the Flood Operations Centre over a period of weeks.
- Contact details for Flood Operations Engineers and Flood Officers are up to date.
- Current copies of the following documents are available in the Flood Operations
   Centre:
  - Manual of Operational Procedures for Flood Mitigation for Wivenhoe Dam and Somerset Dam.
  - o Manual of Operational Procedures for Flood Mitigation for North Pine Dam.
  - Wivenhoe Dam Emergency Action Plan.



- Somerset Dam Emergency Action Plan.
- o North Pine Dam Emergency Action Plan.
- The following facilities are available in the Flood Operations Centre:
  - The data collection and modelling systems are required to manage Flood Events at Wivenhoe, Somerset and North Pine dams.
  - o Sufficient stationary and forms.
  - Landline telephone, mobile telephone, satellite telephone, Seqwater radio network, facsimile and email communication systems.
  - Power systems and back-up power systems required to ensure computer system reliability during a flood event.

The Duty Flood Operations Engineer must ensure that they:

- Are contactable at all times by telephone.
- Have constant access to facilities that provide appropriate real time monitoring of dam and catchment conditions.
- Are able to travel to the Flood Operations Centre in two hours to direct the mobilisation and operation of a flood event, without compromising the safety of the dams or the intent of the Flood Mitigation Manuals.
- As incoming Duty Flood Engineer, organise handover from the current duty staff.
   This handover normally occurs in the Flood Operations Centre and involves both the staff coming off a period of close call and the staff commencing a period of close call.
   Expected weather conditions during the commencing close call period and any current issues impacting on the operation of the Flood Operations Centre are to be discussed during the handover.
- As outgoing Duty Flood Engineer, prepare a status summary sheet for Wivenhoe,
   Somerset and North Pine dams as shown in Appendix A.
- Contact the Flood Operations Manager should any issue arise that has the potential to adversely impact on the operations of Flood Operations Centre.

While on close call, Flood Officers are to ensure that they:



- They are contactable at all times by telephone.
- Report to the Duty Flood Operations Engineer if at any time during a close call period they become "unfit for duty".
- Are able to travel to the Flood Operations Centre within two hours of being called.
- Attend the close call handover meeting organised by the Flood Operations Engineers.

### 2.2 Mobilisation

### **Purpose**

This procedure is used to manage mobilisation of the Flood Operations Centre for a Flood Event.

### Scope

This procedure applies to the mobilisation of the Flood Operations Centre for Flood Events impacting on Wivenhoe, Somerset and North Pine dams. It defines the responsibilities of the Flood Operations Engineers leading up to and during Flood Operations Centre mobilisation.

### **Responsibilities (Pre-Mobilisation)**

It is the responsibility of the Duty Flood Operations Engineer to declare a Flood Event and mobilise the Flood Operations Centre. If the Duty Flood Operations Engineer considers it possible for the Full Supply Level of Wivenhoe, Somerset or North Pine Dam to be exceeded as a result of rainfall occurring in the dam catchments, the Flood Operations Centre is to be mobilised.

If significant rainfall is forecast or appears possible, the Duty Flood Operations Engineer is to adopt a conservative approach in mobilising the Flood Operations Centre (i.e. when in doubt, mobilise the Centre). The decision to mobilise is to be based on BOM forecasts and available rainfall and streamflow data. The reasons for mobilisation or non-mobilisation are to be recorded in the Event Log located in the Flood Operations Centre.

In instances where catchment runoff is likely to be low and the full supply level of a storage



is likely to be exceeded by less than 100 millimetres, consideration can be given to not mobilising the Flood Operations Centre and managing the event through operational releases. Such an approach should not be used if BOM forecasts and catchment conditions provide for any possibility of catchment runoff that may result in the full supply level of a storage being exceeded by 100 millimetres.

### **Responsibilities (Post-Mobilisation)**

Once the decision has been made to mobilise the Flood Operations Centre, the Duty Flood Operations Engineer is to undertake the following actions:

- Notify the Senior Flood Operations Engineers of the mobilisation.
- Notify the Flood Operations Manager of the mobilisation.
- Commence recording significant events in the Event Log (see Appendix B for sample Flood Event log).
- Contact the required Flood Officers on close call and direct them to travel to the Flood Operations Centre to commence duty.
- Contact the relevant Sequater Operations Coordinator and instruct the Coordinator to send appropriate Operations Staff to the dams impacted by the Flood Event. The Sequater Operations Coordinator is also to be advised of the expected duration of the Flood Event to allow to Coordinator to organise suitable staffing arrangements for the dam for the duration of the event. Contact details for the Sequater Operations Coordinator can be found in the Emergency Action Plans of the dams being impacted by the Flood Event.

### 2.3 Normal Operations

### **Purpose**

This procedure is used to manage the operation of the Flood Operations Centre during a Flood Event when communications with operations personnel at the dams are working normally.



### Scope

This procedure applies to the operation of the Flood Operations Centre during Flood Events impacting on Wivenhoe, Somerset and North Pine dams. It defines the responsibilities of the Flood Operations Engineers and the Flood Officers during Flood Operations Centre operations.

### **Responsibilities (Staffing of the Dams and Flood Operations Centre)**

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. During a Flood Event, the Flood Operations Manager is to ensure that:

- Suitable staffing arrangements are in place for the Flood Operations Centre and at the impacted dams for the expected duration of the Flood Event. Generally, staff are to work in 12 hour shifts that commence at either 7:00am or 7:00pm. However, shift lengths and shift start and end times can be varied as required, to allow appropriate management of the Flood Event. Staff rosters at the dams are to be developed in conjunction with the relevant Seqwater Operations Coordinator. Contact details for the Seqwater Operations Coordinators can be found in the Emergency Action Plans of the dams being impacted by the Flood Event.
- Staff working in the Flood Operations Centre during a Flood Event use the Flood
  Event Shift Log to sign on at the commencement of a shift and sign off at the end of a
  shift.

### **Responsibilities (Operations within the Flood Operations Centre)**

Once the flood response team has been mobilised, it is the responsibility of the Duty Flood Operations Engineer to direct the operations of the Flood Control Centre. During a Flood Event, the Duty Flood Operations Engineer retains this responsibility until it is formally handed over to the Flood Operations Engineer taking the next shift.

Once the Flood Operations Centre is mobilised, the Duty Flood Operations Engineer is responsible for the following:

Recording all Significant Events in the Event Log.



- Maintaining the integrity of ALERT data used to manage the event. This includes
  rejecting data of unacceptable quality and notifying Seqwater's Hydrographic staff of
  issues with Seqwater ALERT stations. The contact details of Hydrographic staff can
  be found in the Emergency Action Plans for the dams. Notification should be in the
  form of an email.
- Directing flood releases from the dams in accordance with the Flood Mitigation
   Manuals and using the Flood Modelling Systems to support decision making.
- Rectifying software or hardware problems that adversely affect the Flood Modelling Systems, by directing the Computer Systems Officers responsible for maintaining the computer systems in the Flood Operations Centre.
- Rectifying communications issues by managing any required rectification works.
- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made and appropriately recorded in the Event Log.
- Maintaining accurate plots of headwater levels in each of the dams.
- Conducting end of shift handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Radial gate, sluice gate and regulator valve openings at each dam.
  - o Flood release procedures being applied and the reason for their selection.
  - o Status of compliance with the Flood Manuals and Emergency Action Plans.
  - o Status of the communication systems.
  - Status of the data gathering network.
  - Status of computer systems and Flood Modelling Systems.
  - o Any areas of concern associated with the management of the Flood Event.
  - Areas in which the discretion has been exercised in accordance with the Flood Manuals.

While on close call, Flood Officers are to ensure that:

• Undertake Flood Event duties as directed by the Duty Flood Operations Engineer.



At the completion of a Flood Event, the Flood Operations Manager is required to produce a report on the event in accordance with the Flood Mitigation Manuals.

### 2.4 Loss of Communications

### **Purpose**

This procedure is used to manage the operation of the Flood Operations Centre during a Flood Event when communications with operations personnel at the dams are lost.

### Scope

This procedure applies to the operation of the Flood Operations Centre during a Flood Events impacting on Wivenhoe, Somerset and North Pine dams. It defines the responsibilities of the Flood Operations Engineer during Flood Operations Centre operations.

### Responsibilities

In the event of loss of communications with a dam, responsibility for flood operations passes to the Dam Supervisor at that dam. When it is determined the communications fault arises at the Flood Operations Centre end of the network, the Duty Flood Operations Engineer is to make arrangements for the communications link to be repaired as soon as possible.

When repair of the fault is not within the control of the Duty Flood Operations Engineer, the problem is to be reported to the appropriate authority and the communication line is to be periodically checked to determine if it has been repaired. Upon resumption of communications, the Duty Flood Operations Engineer is to assess the situation and resume responsibility for flood operations in accordance with the Flood Manuals.



### 3 FLOOD OPERATIONS CENTRE – FLOOD MODEL MAINTENANCE AND FLOOD EVENT ACTIONS

### 3.1 Preparedness

### **Purpose**

This procedure is used to ensure that the Flood Operations Centre is maintained in a suitable state of preparedness for Flood Events.

### Scope

This procedure applies to the maintenance of the Flood Operations Centre for Flood Events. It defines the responsibilities of the Flood Operations Engineers in ensuring that the Flood Operations Centre is properly maintained.

### Responsibilities

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. This Flood Operations Manager is to ensure that:

- A Flood Software Register containing a listing of the current versions of the computer programs used for flood operations, their purpose and their directory location within the computer system, is maintained within the Flood Operations Centre.
- A Password Register containing a listing of all user names and passwords used for flood operations software is maintained within the Flood Operations Centre.
- A Directory Register containing standard directory structures for managing archival data and flood events is maintained within the Flood Operations Centre.
- All operational computers are clearly labelled and a Computer Register is maintained to summarise the programs that are used on each computer during flood events and the directory structure used on each computer for managing flood event data.
- The current versions of the computer programs used for flood operations are run at least monthly to verify their correct operation.



### 3.2 Mobilisation

### **Purpose**

This procedure is used to manage mobilisation of the Flood Operations Centre for a Flood Event.

### **Scope**

This procedure applies to the mobilisation of the Flood Operations Centre for Flood Events impacting on Wivenhoe, Somerset and North Pine dams. It defines the responsibilities of the Flood Operations Engineers following mobilisation of the Flood Operations Centre.

### Responsibilities

Once the decision has been made to mobilise the Flood Operations Centre, the Duty Flood Operations Engineer is to ensure that the following actions are undertaken:

- A start time for the event is established. This time will generally be 9:00am on the day preceding the commencement of the event rainfall.
- A suitable directory structure is established within the computer network to manage the flood event data in accordance with the
- All rainfall and streamflow data for the event is examined and all suspect data is removed prior to use in the Flood Modelling Systems. Any stations providing unreliable data are to be marked "out of action".
- Inflow hydrographs are to be derived for the following locations as appropriate:
  - o Wivenhoe Dam.
  - Somerset Dam.
  - o North Pine Dam.
  - Lockyer Creek Catchment.
  - Bremer River Catchment

These derived inflow hydrographs are also to be examined using a variety of rainfall scenarios. The following cases can be used as a guide:

- o Actual rainfall.
- o Actual rainfall plus 100% of forecast rainfall.



- o Actual rainfall plus 50% of forecast rainfall.
- o Actual rainfall plus 200% of forecast rainfall.
- Input the derived inflow hydrographs for Wivenhoe Dam, Somerset Dams Lockyer
  Creek Catchment and Bremer River Catchment into Wivenhoe and Somerset
  Operations Spreadsheet and run this program. Based on the resulting data from the
  operations spreadsheet and in accordance with the strategies outlined in the Flood
  Mitigation Manual, determine gate operations strategies for Wivenhoe and Somerset
  dams.
- Input the derived inflow hydrographs for North Pine Dam into North Pine Operations
   Spreadsheet and run this program. Based on the resulting data from the operations
   spreadsheet and in accordance with the strategies outlined in the Flood Mitigation
   Manual, determine gate operations strategies for North Pine Dam.
- As appropriate, advise the following external parties of the gate operations strategies
  to allow road closure arrangements to be undertaken prior to roads becoming
  inundated (see Emergency Action Plans for contact details):
  - o Moreton Bay Regional Council (North Pine Dam)
  - Ipswich City Council (Wivenhoe Dam)
  - o Somerset Regional Council (Somerset Dam)

If these agencies cannot be contacted, releases can be initiated if the safety of a dam is at risk. However every attempt at contact must be made if the water outflow resulting from a gate operation is likely to adversely impact on a public road.

- Direct gate operations at the dams as appropriate. Instructions to Dam Supervisors for
  gate movements should be in writing in the form of a Flood Operations Directive as
  contained in Appendix C. Dam Supervisors should acknowledge the gate operations
  in writing once they have been undertaken.
- Advise Seqwater's Dam and Source Operations Manager of gate operations by providing a copy of all Flood Operations Directives. Regular updates to Seqwater's Dam and Source Operations Manager may also be required to advise of longer term strategies to manage the Flood Event. This allows Seqwater to provide appropriate Flood Event advice to the public and other stakeholders, including the Queensland Water Commission and the Water Grid Manager. Such communication will generally be initiated by the Dam and Source Operations Manager.



- As appropriate, advise the following external parties of the gate operations strategies (see Emergency Action Plans for contact details):
  - o Bureau of Meteorology (All Dams)
  - o Brisbane City Council (All Dams)
  - o Dam Safety Regulator (All Dams)

### 3.3 Normal Operations

### **Purpose**

This procedure is used to manage the operation of the Flood Operations Centre during a Flood Event when communications with operations personnel at the dams are working normally.

### Scope

This procedure applies to the operation of the Flood Operations Centre during a Flood Event.

### Responsibilities

Prior to the flood event peak being understood, the Duty Flood Operations Engineer is to ensure that the actions contained in Section 3.2 (above) are undertaken on an hourly basis. To summarise, these actions are:

- Ensure rainfall and streamflow input data integrity.
- Derive required hydrographs.
- Update gate operations spreadsheets.
- Determine gate operations strategies in accordance with the Flood Mitigation Manuals.
- Advise Emergency Response Agencies and Sequater of gate operations strategies.
- Direct gate operations at the dams.

Once the flood event peak is understood, these actions can be undertaken at time intervals of longer than one hour as appropriate. Should a significant variation in gate operation strategy



occur from the previously derived strategy, it is most important that the following agencies are advised of the variation as soon as possible:

- Local Authority responsible for road closures.
- Any other impacted Local Authorities.
- Bureau of Meteorology.
- Dam Safety Regulator.
- Seqwater.

### 3.4 Loss of Communications

### **Purpose**

This procedure is used to manage the operation of the Flood Operations Centre during a Flood Event when communications with operations personnel at the dams are lost.

### Scope

This procedure applies to the operation of the Flood Operations Centre during a Flood Event.

### Responsibilities

As outlined in Section 2.4, in the event of loss of communications with a dam, responsibility for flood operations passes to the Dam Supervisor at that dam. However, once communications are restored following a loss of communications event, the Duty Flood Operations Engineer on duty is to ensure that the following actions are undertaken.

- Determine the gate operation sequence used during the loss of communications event and input this sequence into gate operations spreadsheets.
- Resume actions and procedures as contained in Section 3.3 (above).

It is critical to ensure that the gate operation sequence used by the Dam Operators during the period that communications was lost is fully understood when determining gate operations strategies following a Loss of Communications event. Failure to do so could result in a departure from the Flood Mitigation Manual.



# 4 WIVENHOE DAM

# 4.1 Preparedness

## Purpose

This procedure is used to ensure that Wivenhoe Dam is maintained in a suitable state of preparedness for Flood Events.

# Scope

This procedure applies to the maintenance of Wivenhoe Dam for Flood Events. It defines the responsibilities of the Sequater Operations Coordinator responsible for Wivenhoe Dam and the Dam Operators.

# **Background**

Wivenhoe Dam and Somerset Dam both have significant flood storage capacities and have the ability, when operated in conjunction with one another, of substantially reducing downstream flood flows. The flood mitigation capability of the dams is a function of the magnitude of the incoming flood event and the volume of flood storage available. The larger the flood and the closer the storage is to FSL, the less capability there will be to mitigate the effects.

The structural safety of the dam is paramount as failure of Wivenhoe Dam could have catastrophic consequences due to the magnitude of the flood damage which would be caused downstream. It is therefore necessary that the dam is kept ready for flood operations at all times and that a Dam Supervisor be available to initiate flood releases within two hours of being directed to mobilise. Failure to maintain this state of readiness could endanger the integrity of the dam and its ability to control downstream flood releases.

The safety of the Wivenhoe Dam depends primarily on the proper operation of the radial gates. This infrastructure is used to control flood releases and the operation of the infrastructure relies on the proper functioning of the mechanical hoist mechanisms and their electric and hydraulic power supply and controls. Wivenhoe Dam is an earth and rockfill dam that cannot withstand overtopping without damage or risk of failure.



# Responsibilities

The Sequater Operations Coordinator responsible for Wivenhoe Dam is to ensure that:

- At least two Dam Operators are on close call and ready to attend Wivenhoe Dam if called.
- Sufficient Dam Operators are available to staff Wivenhoe Dam if a Flood Event is declared.
- Contact details for Dam Operators are up to date.
- Current copies of the following documents are available at Wivenhoe Dam:
  - Manual of Operational Procedures for Flood Mitigation for Wivenhoe Dam and Somerset Dam.
  - o Wivenhoe Dam Emergency Action Plan.
  - Wivenhoe Dam Standing Operating Procedures.
  - Wivenhoe Dam Operation and Maintenance Manual.
- The following facilities are available at Wivenhoe Dam:
  - Sufficient stationary and forms.
  - Landline telephone, mobile telephone, satellite telephone, Seqwater Radio
     Network, Facsimile and Email communication systems.
  - Power systems and back-up power systems required to ensure computer system and communication system reliability during a flood event.
- All preventive maintenance work is undertaken at the dam in accordance with the Wivenhoe Dam – Operation and Maintenance Manual.
- Flood release infrastructure and associated back-up systems are maintained in a constant state of operational readiness for Flood Events.
- The Flood Operations Engineer on duty is advised should any issue arise that has the potential to adversely impact on flood operations of Wivenhoe Dam.

While on close call, Dam Operators are to ensure that:

• They are contactable at all times either by telephone.



- In the event of a Flood Officer being "unfit for duty" the Flood Officer is to report the fact to the Flood Operations Engineer currently on close call.
- They are able to travel to Wivenhoe Dam within two hours of being called.

# 4.2 Mobilisation

# **Purpose**

This procedure is used to manage mobilisation of Wivenhoe Dam for a Flood Event.

# Scope

This procedure applies to the mobilisation of Wivenhoe Dam for Flood Events. It defines the responsibilities of the Duty Flood Operations Engineer, the Sequater Operations Coordinator responsible for Wivenhoe Dam and the Dam Supervisor, leading up to and during Wivenhoe Dam mobilisation.

# Responsibilities

It is the responsibility of the Duty Flood Operations Engineer to declare a Flood Event and notify the Sequater Operations Coordinator responsible for Wivenhoe Dam that flood releases are likely from the dam. Once the decision has been made to mobilise the Flood Operations Centre, the Sequater Operations Coordinator responsible for Wivenhoe Dam is to ensure that the following actions are undertaken:

- Notify the Principal Engineer Dam Safety of the mobilisation.
- Commence recording significant events in the Event Log.
- Contact the required Dam Operators on close call and direct them to travel to Wivenhoe Dam to commence duty.
- Specify which of the Dam Operators is to be the Dam Supervisor for the purposes of managing the Flood Event.

Once the Dam Supervisor reaches site, the Dam Supervisor is to ensure that the following actions are undertaken:



- Check that communications exist between Wivenhoe Dam and the Flood Operations Centre.
- Commence recording significant events in the Event Log.
- Complete the Flood Readiness Checklist contained in Appendix D.
- Undertake Flood Operations as directed by the Flood Operations Centre.

Prior to flood releases initiating, the Duty Flood Operations Engineer is to contact the Brisbane City, Ipswich City and Somerset Regional Councils to advise of the likely impact of the releases, particularly in relation to the public road crossings downstream of the dam. Contact details for these Councils are contained in the Wivenhoe Dam Emergency Action Plan.

# 4.3 Normal Operations

## **Purpose**

This procedure is used to manage the operation of Wivenhoe Dam during a Flood Event when communications with the Flood Operations Centre are working normally.

## Scope

This procedure applies to the operation of Wivenhoe Dam during a Flood Event. It defines the responsibilities the Flood Operations Engineers, the Seqwater Operations Coordinator responsible for Wivenhoe Dam and the Dam Supervisor during flood operations at Wivenhoe Dam.

# Responsibilities (Staffing of the Dam)

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. During a Flood Event at Wivenhoe Dam, this Flood Operations Manager is to ensure that:

 Suitable staffing arrangements are in place at Wivenhoe Dam for the duration of the Flood Event. Generally, staff are to work in 12 hour shifts that commence at either 7:00am or 7:00pm. However, shift lengths and shift start and end times can be varied



as required, allowing appropriate management of the Flood Event. Staff rosters at Wivenhoe Dam are to be developed in conjunction with the Sequater Operations Coordinator responsible for Wivenhoe Dam.

All staff working at Wivenhoe Dam during a Flood Event use the Flood Event Shift
 Log to sign on at the commencement of a shift and sign off at the end of a shift.

## **Responsibilities (Operation of the Dam)**

Once flood operations commence at Wivenhoe Dam, the Dam Supervisor is responsible for the following:

- Recording all Significant Events in the Event Log.
- Undertaking flood releases from the dam strictly in accordance with the directions of the Flood Operations Centre.
- Rectifying communications issues at the dam by managing any required rectification works.
- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made.
- Conducting end of shift handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Radial gate, sluice gate and regulator valve openings at each dam.
  - o Status of the communication systems.
  - o Any areas of concern associated with the management of the Flood Event.
- Advising the Flood Operations Engineer on duty should any issue arise that has the
  potential to adversely impact on flood operations during the Flood Event.
- Repairing any flood infrastructure breakdowns that have the potential to adversely
  impact on flood operations of Wivenhoe Dam after obtaining approval for such
  repairs from the Flood Operations Engineer on duty. Repairs are to be undertaken in
  accordance with the Operation and Maintenance Manual and the Flood Manuals.

At regular intervals during the Flood Event, the Duty Flood Operations Engineer is to contact the Brisbane City, Ipswich City and Somerset Regional Councils to advise of the



current status of the flood releases and the expected releases and potential impacts during the course of the Flood Event. Contact details for these Councils are contained in the Wivenhoe Dam Emergency Action Plan.

# 4.4 Loss of Communications

# **Purpose**

This procedure is used to manage the operation of Wivenhoe Dam during a Flood Event when communications with the Flood Operations Centre are lost.

# **Scope**

This procedure applies to the operation of Wivenhoe Dam during a Flood Event. It defines the responsibilities of the Dam Supervisor in operating Wivenhoe Dam.

# Responsibilities

In the event of loss of communications with the Flood Operations Centre, responsibility for flood operations passes to the Dam Supervisor. The Dam Supervisor is then to:

- Take all practicable measures to restore communications with Flood Operations
   Centre and periodically check the lines of communication for any change.
- Make flood releases from Wivenhoe Dam in accordance with the Manual of Operational Procedures for Flood Releases from Wivenhoe Dam.
- Recording all Significant Events in the Event Log.
- Attempt all external notifications as contained in the Wivenhoe Dam Emergency Action Plan.
- The required frequency of gate operations and water level readings will be a function of the magnitude of the flood. It is therefore the responsibility of the Dam supervisor to monitor each event as it develops and adopt observation frequencies to suit. At the completion of a flood event, the Dam Supervisor is to close all radial and sluice gates once the lake level falls to EL 67.0 metres.



# 5 SOMERSET DAM

# 5.1 Preparedness

#### **Purpose**

This procedure is used to ensure that Somerset Dam is maintained in a suitable state of preparedness for Flood Events.

# **Scope**

This procedure applies to the maintenance of Somerset Dam for Flood Events. It defines the responsibilities of the Sequater Operations Coordinator responsible for Somerset Dam and the Dam Operators.

## **Background**

Somerset Dam and Wivenhoe Dam both have significant flood storage capacities and have the ability, when operated in conjunction with one another, of substantially reducing downstream flood flows. The flood mitigation capability of the dams is a function of the magnitude of the incoming flood event and the volume of flood storage available. The larger the flood and the closer the storage is to FSL, the less capability there will be to mitigate the effects.

The structural safety of the dam is paramount as failure of Somerset Dam could have catastrophic consequences due to the magnitude of the flood damage which would be caused downstream. Whilst Wivenhoe Dam has the capacity to mitigate the flood effects of such a failure in the absence of any other flooding, if the failure were to occur during major flooding, Wivenhoe Dam could be overtopped and destroyed also.

It is therefore necessary that the dam is kept ready for flood operations at all times and that a Dam Supervisor be available to initiate flood releases within two hours of being directed to mobilise. Failure to maintain this state of readiness could endanger the integrity of the dam and its ability to control downstream flood releases.

The safety of the Somerset Dam depends primarily on the proper operation of the spillway gates and the low level sluice gates. This infrastructure is used to control flood releases and



the operation of the infrastructure relies on the proper functioning of the mechanical hoist mechanisms and their electric power supply and controls. Somerset Dam is a mass concrete dam that can withstand limited overtopping without damage and this fact is made use of in the flood mitigation procedures.

## Responsibilities

The Sequater Operations Coordinator responsible for Somerset Dam is to ensure that:

- At least two Dam Operators are on close call and ready to attend Somerset Dam if called.
- Sufficient Dam Operators are available to staff Somerset Dam if a Flood Event is declared.
- Contact details for Dam Operators are up to date.
- Current copies of the following documents are available at Somerset Dam:
  - Manual of Operational Procedures for Flood Mitigation for Wivenhoe Dam and Somerset Dam.
  - o Somerset Dam Emergency Action Plan.
  - Somerset Dam Standing Operating Procedures.
  - Somerset Dam Operation and Maintenance Manual.
- The following facilities are available at Somerset Dam:
  - o Sufficient stationary and forms.
  - Landline telephone, mobile telephone, satellite telephone, Seqwater Radio
     Network, Facsimile and Email communication systems.
  - Power systems and back-up power systems required to ensure computer system and communication system reliability during a flood event.
- All preventive maintenance work is undertaken at the dam in accordance with the Somerset Dam – Operation and Maintenance Manual.
- Flood release infrastructure and associated back-up systems are maintained in a constant state of operational readiness for Flood Events.
- The Flood Operations Engineer on duty is advised should any issue arise that has the potential to adversely impact on flood operations of Somerset Dam.



While on close call, Dam Operators are to ensure that:

- They are contactable at all times either by telephone.
- In the event of a Flood Officer being "unfit for duty" the Flood Officer is to report the fact to the Flood Operations Engineer currently on close call.
- They are able to travel to Somerset Dam within two hours of being called.

## 5.2 Mobilisation

# **Purpose**

This procedure is used to manage mobilisation of Somerset Dam for a Flood Event.

# Scope

This procedure applies to the mobilisation of Somerset Dam for Flood Events. It defines the responsibilities of the Duty Flood Operations Engineer, the Sequater Operations Coordinator responsible for Somerset Dam and the Dam Supervisor, leading up to and during Somerset Dam mobilisation.

#### Responsibilities

It is the responsibility of the Duty Flood Operations Engineer to declare a Flood Event and notify the Sequater Operations Coordinator responsible for Somerset Dam that flood releases are likely from the dam. Once the decision has been made to mobilise the Flood Operations Centre, the Sequater Operations Coordinator responsible for Somerset Dam is to ensure that the following actions are undertaken:

- Notify the Principal Engineer Dam Safety of the mobilisation.
- Commence recording significant events in the Event Log.
- Contact the required Dam Operators on close call and direct them to travel to Somerset Dam to commence duty.
- Specify which of the Dam Operators is to be the Dam Supervisor for the purposes of managing the Flood Event.



Once the Dam Supervisor reaches site, the Dam Supervisor is to ensure that the following actions are undertaken:

- Check that communications exist between Somerset Dam and the Flood Operations Centre.
- Commence recording significant events in the Event Log.
- Complete the Flood Readiness Checklist contained in Appendix E.
- Undertake Flood Operations as directed by the Flood Operations Centre.

# **5.3** Normal Operations

## **Purpose**

This procedure is used to manage the operation of Somerset Dam during a Flood Event when communications with the Flood Operations Centre are working normally.

# Scope

This procedure applies to the operation of Somerset Dam during a Flood Event. It defines the responsibilities the Flood Operations Engineers, the Sequater Operations Coordinator responsible for Somerset Dam and the Dam Supervisor during flood operations at Somerset Dam.

# **Responsibilities (Staffing of the Dam)**

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. During a Flood Event at Somerset Dam, this Flood Operations Manager is to ensure that:

 Suitable staffing arrangements are in place at Somerset Dam for the duration of the Flood Event. Generally, staff are to work in 12 hour shifts that commence at either 7:00am or 7:00pm. However, shift lengths and shift start and end times can be varied



as required, allowing appropriate management of the Flood Event. Staff rosters at Somerset Dam are to be developed in conjunction with the Sequater Operations Coordinator responsible for Somerset Dam.

 All staff working at Somerset Dam during a Flood Event use the Event Log to sign on at the commencement of a shift and sign off at the end of a shift.

# Responsibilities (Operation of the Dam)

Once flood operations commence at Somerset Dam, the Dam Supervisor is responsible for the following:

- Recording all Significant Events in the Event Log.
- Undertaking flood releases from the dam strictly in accordance with the directions of the Flood Operations Centre.
- Rectifying communications issues at the dam by managing any required rectification works.
- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made.
- Conducting end of shift handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Radial gate, sluice gate and regulator valve openings at each dam.
  - Status of the communication systems.
  - o Any areas of concern associated with the management of the Flood Event.
- Advising the Flood Operations Engineer on duty should any issue arise that has the
  potential to adversely impact on flood operations during the Flood Event.
- Repairing any flood infrastructure breakdowns that have the potential to adversely
  impact on flood operations of Somerset Dam after obtaining approval for such repairs
  from the Flood Operations Engineer on duty. Repairs are to be undertaken in
  accordance with the Operation and Maintenance Manual and the Flood Manuals.



At regular intervals during the Flood Event, the Duty Flood Operations Engineer is to contact the Somerset Regional Council to advise of the current status of the flood releases and provide notification if the Lake Level is likely to impact on Kilcoy. Contact details for the Somerset Regional Council are contained in the Somerset Dam Emergency Action Plan.

## 5.4 Loss of Communications

# **Purpose**

This procedure is used to manage the operation of Somerset Dam during a Flood Event when communications with the Flood Operations Centre are lost.

# **Scope**

This procedure applies to the operation of Somerset Dam during a Flood Event. It defines the responsibilities of the Dam Supervisor in operating Somerset Dam.

## Responsibilities

In the event of loss of communications with the Flood Operations Centre, responsibility for flood operations passes to the Dam Supervisor. The Dam Supervisor is then to:

- Take all practicable measures to restore communications with Flood Operations
   Centre and periodically check the lines of communication for any change.
- Make flood releases from Somerset Dam in accordance with the Manual of Operational Procedures for Flood Releases from Somerset Dam.
- Recording all Significant Events in the Event Log.
- Attempt all external notifications as contained in the Somerset Dam Emergency Action Plan.

The required frequency of gate operations and water level readings will be a function of the magnitude of the flood. It is therefore the responsibility of the Dam supervisor to monitor each event as it develops and adopt observation frequencies to suit. At the completion of a



flood event, the Dam Supervisor is to close all radial and sluice gates once the lake level falls to EL 99.0 metres.



# 6 NORTH PINE DAM

# 6.1 Preparedness

## Purpose

This procedure is used to ensure that North Pine Dam is maintained in a suitable state of preparedness for Flood Events.

# Scope

This procedure applies to the maintenance of North Pine Dam for Flood Events. It defines the responsibilities of the Sequater Operations Coordinator responsible for North Pine Dam and the Dam Operators.

# **Background**

North Pine Dam has a very small flood storage capacity and essentially must release nearly all incoming flood waters as soon as they enter the reservoir with very little flood mitigation. Because of this small flood storage capacity and the size of the catchment, flood releases may be necessary within a relatively short time of the commencement of heavy rainfall within the catchment. This is especially the case when the storage is at or near the Full Supply Level.

It is therefore necessary that the dam is kept ready for flood operations at all times and that a Dam Supervisor be available to initiate flood releases within two hours of being directed to mobilise. Failure to maintain this state of readiness could endanger the integrity of the dam and its ability to control downstream flood releases.

The safety of the dam depends primarily on the proper operation of the spillway gates which are used to control maximum flood levels. Such operation in turn relies on the proper functioning of the mechanical hoist mechanisms and their electric power supply and controls.

## Responsibilities

The Sequater Operations Coordinator responsible for North Pine Dam is to ensure that:

 At least two Dam Operators are on close call and ready to attend North Pine Dam if called.



- Sufficient Dam Operators are available to staff North Pine Dam if a Flood Event is declared.
- Contact details for Dam Operators are up to date.
- Current copies of the following documents are available at North Pine Dam:
  - o Manual of Operational Procedures for Flood Releases from North Pine Dam.
  - o North Pine Dam Emergency Action Plan.
  - o North Pine Dam Standing Operating Procedures.
  - North Pine Dam Operation and Maintenance Manual.
- The following facilities are available at North Pine Dam:
  - o Sufficient stationary and forms.
  - Landline telephone, mobile telephone, satellite telephone, Seqwater Radio
     Network, Facsimile and Email communication systems.
  - Power systems and back-up power systems required to ensure computer system and communication system reliability during a flood event.
- All preventive maintenance work is undertaken at the dam in accordance with the North Pine Dam – Operation and Maintenance Manual.
- Flood release infrastructure and associated back-up systems are maintained in a constant state of operational readiness for Flood Events.
- The Flood Operations Engineer on duty is advised should any issue arise that has the
  potential to adversely impact on flood operations of North Pine Dam.

While on close call, Dam Operators are to ensure that:

- They are contactable at all times either by telephone.
- In the event of a Flood Officer being "unfit for duty" the Flood Officer is to report the fact to the Flood Operations Engineer currently on close call.
- They are able to travel to North Pine Dam within two hours of being called.



# 6.2 Mobilisation

# **Purpose**

This procedure is used to manage mobilisation of North Pine Dam for a Flood Event.

#### Scope

This procedure applies to the mobilisation of North Pine Dam for Flood Events. It defines the responsibilities of the Duty Flood Operations Engineer, the Sequater Operations Coordinator responsible for North Pine Dam and the Dam Supervisor, leading up to and during North Pine Dam mobilisation.

# Responsibilities

It is the responsibility of the Duty Flood Operations Engineer to declare a Flood Event and notify the Sequater Operations Coordinator responsible for North Pine Dam that flood releases are likely from the dam. Once the decision has been made to mobilise the Flood Operations Centre, the Sequater Operations Coordinator responsible for North Pine Dam is to ensure that the following actions are undertaken:

- Notify the Principal Engineer Dam Safety of the mobilisation.
- Commence recording significant events in the Event Log.
- Contact the required Dam Operators on close call and direct them to travel to North Pine Dam to commence duty.
- Specify which of the Dam Operators is to be the Dam Supervisor for the purposes of managing the Flood Event.

Once the Dam Supervisor reaches site, the Dam Supervisor is to ensure that the following actions are undertaken:

- Check that communications exist between North Pine Dam and the Flood Operations Centre.
- Commence recording significant events in the Event Log.
- Complete the Flood Readiness Checklist contained in Appendix F.
- Undertake Flood Operations as directed by the Flood Operations Centre.



Prior to flood releases initiating, the Duty Flood Operations Engineer is to contact the Moreton Bay Regional Council to advise of the likely impact on Youngs Crossing and ensure that this crossing is closed to the public prior to being impacted by the releases. Contact details for the Moreton Bay Regional Council are contained in the North Pine Dam Emergency Action Plan.

# **6.3** Normal Operations

# **Purpose**

This procedure is used to manage the operation of North Pine Dam during a Flood Event when communications with the Flood Operations Centre are working normally.

# **Scope**

This procedure applies to the operation of North Pine Dam during a Flood Event. It defines the responsibilities the Flood Operations Engineers, the Sequater Operations Coordinator responsible for North Pine Dam and the Dam Supervisor during flood operations at North Pine Dam.

## **Responsibilities (Staffing of the Dam)**

Seqwater must at all times designate a Flood Operations Manager who is responsible for the overall management of the Flood Operations Centre. During a Flood Event at North Pine Dam, this Flood Operations Manager is to ensure that:

- Suitable staffing arrangements are in place at North Pine Dam for the duration of the Flood Event. Generally, staff are to work in 12 hour shifts that commence at either 7:00am or 7:00pm. However, shift lengths and shift start and end times can be varied as required, allowing appropriate management of the Flood Event. Staff rosters at North Pine Dam are to be developed in conjunction with the Seqwater Operations Coordinator responsible for North Pine Dam.
- All staff working at North Pine Dam during a Flood Event use the Event Log to sign
  on at the commencement of a shift and sign off at the end of a shift.



## **Responsibilities (Operation of the Dam)**

Once flood operations commence at North Pine Dam, the Dam Supervisor is responsible for the following:

- Recording all Significant Events in the Event Log.
- Undertaking flood releases from the dam strictly in accordance with the directions of the Flood Operations Centre.
- Rectifying communications issues at the dam by managing any required rectification works.
- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made.
- Conducting end of shift handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Radial gate, sluice gate and regulator valve openings at each dam.
  - o Status of the communication systems.
  - o Any areas of concern associated with the management of the Flood Event.
- Advising the Flood Operations Engineer on duty should any issue arise that has the
  potential to adversely impact on flood operations during the Flood Event.
- Repairing any flood infrastructure breakdowns that have the potential to adversely
  impact on flood operations of North Pine Dam after obtaining approval for such
  repairs from the Flood Operations Engineer on duty. Repairs are to be undertaken in
  accordance with the Operation and Maintenance Manual and the Flood Manuals.

At regular intervals as appropriate during the Flood Event, the Duty Flood Operations Engineer is to contact the Moreton Bay Regional Council to advise of the current status of the flood releases and the expected releases and potential impacts during the course of the Flood Event. Contact details for the Moreton Bay Regional Council are contained in the North Pine Dam Emergency Action Plan.



# **6.4** Loss of Communications

# **Purpose**

This procedure is used to manage the operation of North Pine Dam during a Flood Event when communications with the Flood Operations Centre are lost.

# **Scope**

This procedure applies to the operation of North Pine Dam during a Flood Event. It defines the responsibilities of the Dam Supervisor in operating North Pine Dam.

# Responsibilities

In the event of loss of communications with the Flood Operations Centre, responsibility for flood operations passes to the Dam Supervisor. The Dam Supervisor is then to:

- Take all practicable measures to restore communications with Flood Operations
   Centre and periodically check the lines of communication for any change.
- Make flood releases from North Pine Dam in accordance with the Manual of Operational Procedures for Flood Releases from North Pine Dam.
- Recording all Significant Events in the Event Log.
- Attempt all external notifications as contained in the North Pine Dam Emergency Action Plan.

The required frequency of gate operations and water level readings will be a function of the magnitude of the flood. Gate movements need to be carried out for every 15 millimetre rise or fall of the reservoir and on larger events this may require observations and movements at the intervals in the order of five minutes as specified in the Flood Manual. It is therefore the responsibility of the Dam supervisor to monitor each event as it develops and adopt observation frequencies to suit. At the completion of a flood event, the Dam Supervisor is to close all radial gates once the lake level falls to EL 39.55 metres.



# 7 LESLIE HARRISON DAM

# 7.1 Preparedness

## Purpose

This procedure is used to ensure that Leslie Harrison Dam is maintained in a suitable state of preparedness for Flood Events.

#### Scope

This procedure applies to the maintenance of Leslie Harrison Dam for Flood Events. It defines the responsibilities of the Sequater Operations Coordinator responsible for Leslie Harrison Dam, the Flood Operations Coordinators and the Dam Operators.

# **Background**

Leslie Harrison Dam has a very small flood storage capacity and essentially must release nearly all incoming flood waters as soon as they enter the reservoir with very little flood mitigation. Because of this small flood storage capacity and the size of the catchment, flood releases may be necessary within a relatively short time of the commencement of heavy rainfall within the catchment. This is especially the case when the storage is at or near the Full Supply Level.

It is therefore necessary that the dam is kept ready for flood operations at all times and that a Dam Supervisor be available to initiate flood releases within two hours of being directed to mobilise. Failure to maintain this state of readiness could endanger the integrity of the dam and its ability to control downstream flood releases.

The safety of the dam depends primarily on the proper operation of the vertical lift spillway gates which are used to control maximum flood levels. Such operation in turn relies on the proper functioning of the mechanical hoist mechanisms and their electric power supply and controls.

#### Responsibilities

The Sequater Operations Coordinator responsible for Leslie Harrison Dam is to ensure that:



- A Flood Operations Coordinator is on duty at all times to monitor catchment conditions, mobilise staff for flood events and coordinate operations during flood events at Leslie Harrison Dam.
- At least two Dam Operators are on close call and ready to attend Leslie Harrison Dam if called.
- Sufficient Dam Operators are available to staff Leslie Harrison Dam if a Flood Event is declared.
- Contact details for Dam Operators are up to date.
- Current copies of the following documents are available at Leslie Harrison Dam:
  - Manual of Operational Procedures for Flood Releases from Leslie Harrison
     Dam.
  - Leslie Harrison Dam Emergency Action Plan.
  - Leslie Harrison Dam Standing Operating Procedures.
  - Leslie Harrison Dam Operation and Maintenance Manual.
- The following facilities are available at Leslie Harrison Dam:
  - Sufficient stationary and forms.
  - Landline telephone, mobile telephone, satellite telephone, Seqwater Radio
     Network, Facsimile and Email communication systems.
  - Power systems and back-up power systems required to ensure computer system and communication system reliability during a flood event.
- All preventive maintenance work is undertaken at the dam in accordance with the Leslie Harrison Dam – Operation and Maintenance Manual.
- Flood release infrastructure and associated back-up systems are maintained in a constant state of operational readiness for Flood Events.
- The Flood Operations Coordinator on duty is advised should any issue arise that has
  the potential to adversely impact on flood operations of Leslie Harrison Dam.

While on close call, Flood Operations Coordinators are to ensure taht:

• They are contactable at all times by telephone.



- They have facilities to allow appropriate real time monitoring of dam and catchment conditions.
- They are able to travel to a suitable location in sufficient time to direct the
  mobilisation and operation of a flood event without compromising the safety of the
  dams or the intent of the Flood Manual.
- They organise a handover of close call staff on the day at which close call
  commences. This handover can be conducted over the telephone and involves both
  the staff coming off a period of close call and the staff commencing a period of close
  call. Expected weather conditions during the commencing close call period and any
  current issues impacting on the operation of the dam are to be discussed during the
  handover.
- They contact Seqwater's Principal Engineer Dam Safety, should any issue arise that
  has the potential to adversely impact on flood operations at the dam.

While on close call, Dam Operators are to ensure that:

- They are contactable at all times either by telephone.
- In the event of a Flood Officer being "unfit for duty" the Flood Officer is to report the fact to the Flood Operations Engineer currently on close call.
- They are able to travel to Leslie Harrison Dam within two hours of being called.

## 7.2 Mobilisation

## **Purpose**

This procedure is used to manage mobilisation of Leslie Harrison Dam for a Flood Event.

## Scope

This procedure applies to the mobilisation of Leslie Harrison Dam for Flood Events. It defines the responsibilities of the Flood Operations Coordinators on close call, the Sequater Operations Coordinator responsible for Leslie Harrison Dam and the Dam Supervisor, leading up to and during Leslie Harrison Dam mobilisation.



# Responsibilities

It is the responsibility of the Flood Operations Coordinator on close call to declare a Flood Event and notify the Sequater Operations Coordinator responsible for Leslie Harrison Dam that flood releases are likely from the dam. Once the decision has been made to mobilise the dam for a flood event, the Sequater Operations Coordinator responsible for Leslie Harrison Dam is to ensure that the following actions are undertaken:

- Notify the Principal Engineer Dam Safety of the mobilisation.
- Commence recording significant events in the Event Log.
- Contact the required Dam Operators on close call and direct them to travel to Leslie Harrison Dam to commence duty.
- Specify which of the Dam Operators is to be the Dam Supervisor for the purposes of managing the Flood Event.

Once the Dam Supervisor reaches site, the Dam Supervisor is to ensure that the following actions are undertaken:

- Check that communications exist between Leslie Harrison Dam and the Flood Operations Coordinators.
- Commence recording significant events in the Event Log.
- Complete the Flood Readiness Checklist contained in Appendix G.
- Undertake Flood Operations as directed by the Flood Operations Centre.

Prior to flood releases initiating, the Flood Operations Coordinator on close call is to contact the Redland City Council to advise of the likely magnitude of the flood releases and ensure that the Council will contact external parties impacted by the releases. Contact details for the Redland City Council are contained in the Leslie Harrison Dam Emergency Action Plan.



# 7.3 Normal Operations

# **Purpose**

This procedure is used to manage the operation of Leslie Harrison Dam during a Flood Event when communications with the Flood Operations Centre are working normally.

# Scope

This procedure applies to the operation of Leslie Harrison Dam during a Flood Event. It defines the responsibilities the Flood Operations Coordinators, the Sequater Operations Coordinator responsible for Leslie Harrison Dam and the Dam Supervisor during flood operations at Leslie Harrison Dam.

## **Responsibilities (Staffing of the Dam)**

During a Flood Event at Leslie Harrison Dam, the Sequater Operations Coordinator responsible for Leslie Harrison Dam is to ensure that:

- Suitable staffing arrangements are in place at Leslie Harrison Dam for the duration of the Flood Event. Generally, staff are to work in 12 hour shifts that commence at either 7:00am or 7:00pm. However, shift lengths and shift start and end times can be varied as required, allowing appropriate management of the Flood Event.
- All staff working at Leslie Harrison Dam during a Flood Event use the Event Log to sign on at the commencement of a shift and sign off at the end of a shift.

#### Responsibilities (Operation of the Dam)

Once flood operations commence at Leslie Harrison Dam, the Dam Supervisor is responsible for the following:

- Recording all Significant Events in the Event Log.
- Undertaking flood releases from the dam strictly in accordance with the directions of the Flood Operations Coordinators.
- Rectifying communications issues at the dam by managing any required rectification works.



- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made.
- Conducting end of shift handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Radial gate, sluice gate and regulator valve openings at each dam.
  - Status of the communication systems.
  - o Any areas of concern associated with the management of the Flood Event.
- Advising the Flood Operations Coordinator on duty should any issue arise that has the potential to adversely impact on flood operations during the Flood Event.
- Repairing any flood infrastructure breakdowns that have the potential to adversely
  impact on flood operations of Leslie Harrison Dam after obtaining approval for such
  repairs from the Flood Operations Coordinator on duty. Repairs are to be undertaken
  in accordance with the Operation and Maintenance Manual and the Flood Manuals.

At regular intervals during the Flood Event, the Flood Operations Coordinator on close call is to contact the Redland City Council to advise of the current status of the flood releases and the expected releases and potential impacts during the course of the Flood Event. Contact details for the Redland City Council are contained in the Leslie Harrison Dam Emergency Action Plan.

## 7.4 Loss of Communications

# **Purpose**

This procedure is used to manage the operation of Leslie Harrison Dam during a Flood Event when communications with the Flood Operations Coordinators are lost.

#### Scope

This procedure applies to the operation of Leslie Harrison Dam during a Flood Event. It defines the responsibilities of the Dam Supervisor in operating Leslie Harrison Dam.



# Responsibilities

In the event of loss of communications with the Flood Operations Coordinators, responsibility for flood operations passes to the Dam Supervisor. The Dam Supervisor is then to:

- Take all practicable measures to restore communications with Flood Operations
   Coordinators and periodically check the lines of communication for any change.
- Make flood releases from Leslie Harrison Dam in accordance with the Manual of Operational Procedures for Flood Releases from Leslie Harrison Dam.
- Recording all Significant Events in the Event Log.
- Attempt all external notifications as contained in the Leslie Harrison Dam -Emergency Action Plan.

The required frequency of gate operations and water level readings will be a function of the magnitude of the flood. Gate movements need to be carried out for every 7 millimetre rise or fall of the reservoir and on larger events this may require observations and movements at the intervals in the order of five minutes as specified in the Flood Manual. It is therefore the responsibility of the Dam supervisor to monitor each event as it develops and adopt observation frequencies to suit. At the completion of a flood event, the Dam Supervisor is to close all vertical lift gates once the lake level falls to EL 18.30 metres.



# 8 UNCONTROLLED SPILLWAY DAMS

# 8.1 Preparedness

## Purpose

This procedure is used to ensure that Seqwater's twenty uncontrolled spillway dams are maintained in a suitable state of preparedness for Flood Events.

#### Scope

This procedure applies to the maintenance of Seqwater's twenty uncontrolled spillway dams for Flood Events. It defines the responsibilities of the Seqwater Operations Coordinators that are responsible for Seqwater's twenty uncontrolled spillway dams and the Dam Operators.

# **Background**

Seqwater owns twenty uncontrolled spillway dams. During flood events, these dams fill and overflow from a spillway, with Seqwater having no facility to regulate or change these outflows. Seqwater's primary responsibility during such events is to monitor the safety of the dam and provide dam outflow information to the relevant emergency agencies as required. Such agencies will generally be the Bureau of Meteorology and the Local Authority responsible for the area impacted by the dam outflow.

Seqwater's twenty uncontrolled spillway dams generally contain earth and rockfill structures that cannot withstand overtopping without damage or risk of failure. The exceptions to this are Little Nerang Dam and Moogerah Dam that can withstand some limited overtopping without risk. The structural safety of the dams is paramount as failure of a dam could have catastrophic consequences due to the magnitude of the flood damage which would be caused downstream. It is therefore necessary that the dam spillways are kept clear and well maintained and ready for flood outflows at all times and that a Dam Supervisor be available monitor flood releases as required. Failure to properly maintain the dam spillway could endanger the integrity of the dam and its ability to pass flood releases.



# Responsibilities

The Sequater Operations Coordinators responsible for Sequater's twenty uncontrolled spillway dams are to ensure that:

- A Dam Operators is on close call and ready to attend a dam if required.
- Contact details for Dam Operators are up to date.
- Current copies of the following documents are available for each dam:
  - o Emergency Action Plan.
  - o Standing Operating Procedures.
  - Operation and Maintenance Manual.
- The following facilities are available to Dam Operators attending site in a flood event:
  - o Sufficient stationary and forms.
  - Mobile telephone and Email communication systems.
- All preventive maintenance work is undertaken at the dam in accordance with the dam
  Operation and Maintenance Manuals.
- The dam spillway is maintained in a constant state of operational readiness for Flood Events.
- Sequater's Principal Engineer (Dam Safety) is advised of any issue that has the
  potential to adversely impact on flood operations at an uncontrolled spillway dams.

While on close call, Dam Operators are to ensure that:

- They are contactable at all times either by telephone.
- In the event of a Dam Operator being "unfit for duty" the Operator is to report the fact to the relevant Operations Coordinator.
- They are able to travel to the dam to which they are assigned within two hours of being called.



#### 8.2 Mobilisation

# **Purpose**

This procedure is used to manage mobilisation of Sequater's twenty uncontrolled spillway dams for Flood Events.

# **Scope**

This procedure applies to the mobilisation of Seqwater's twenty uncontrolled spillway dams for Flood Events. It defines the responsibilities of Seqwater's Operations Coordinators, Dam Supervisors, and Principal Hydrologist leading up to and during mobilisation.

# Responsibilities

It is the responsibility of the Sequater's Operations Coordinators to ensure that the following actions are undertaken if a spillway overflow occurs:

- Notify Seqwater's Dam Safety and Source Operations Manager, Principal Engineer
   Dam Safety and Principal Hydrologist of the spillway overflow.
- Commence recording significant events in the Event Log.
- Direct monitoring of the dam in accordance with instructions from the Principal Engineer Dam Safety and Principal Hydrologist.
- If a Dam Supervisor is required to attend site, contact the relevant personnel on close call and direct the personnel to travel to the dam to commence duty.

Once the Dam Supervisor reaches site, the Dam Supervisor is to ensure that the following actions are undertaken:

- Commence recording significant events in the Event Log.
- Undertake Flood Operations duties as directed by the Operations Coordinator.

It is the responsibility of the Sequater's Principal Hydrologist to ensure that the following actions are undertaken if a spillway overflow occurs:

• If the magnitude of the flood is likely to have significant downstream impacts, make contact the Bureau of Meteorology and the Local Authority responsible for the area



impacted by the dam outflow and offer assistance in the provision of dam outflow information. Contact details for these agencies are contained in the Seqwater's dam Emergency Action Plan. All such contact should be recorded in the Event Log. A guide outlining when contact should be made is contained in the following table.

DAM	POPULATION AT RISK	SPILLWAY LEVEL (m AHD)	STORAGE LEVEL FOR CONTACT (MODERATE FLOOD) (m AHD)	STORAGE LEVEL FOR CONTACT (MAJOR FLOOD) (m AHD)
Atkinson Dam	47	65.72	*	*
Baroon Pocket Dam	426	217.00	218.5	219.5
Bill Gunn Dam	> 100	110.00	*	*
Borumba Dam	365	135.01	138.0	139.0
Bromelton	6	80.00	*	*
Cedar Pocket	12	100.93	102.0	102.5
Clarendon Dam	> 100	96.00	*	*
Cooloolabin	155	295.91	296.3	296.5
Enoggera	2450	74.37	78.0	80.0
Ewen Maddock	1160	25.30	26.4	26.6
Gold Creek	146	92.75	96.6	97.4
Hinze Dam	120000	82.20	88.4	90.0
Lake MacDonald	142	95.32	96.2	96.5
Lake Manchester	1273	51.09	52.1	52.6
Little Nerang	18	168.02	170.0	171.0
Nindooinbah	3	122.80	*	*
Maroon Dam	352	207.14	208.9	209.3
Moogerah Dam	394	154.91	155.9	156.9
Poona Dam	6	152.70	*	*
Sideling Creek Dam	3948	20.42	20.8	21.2
Wappa Dam	126	44.81	46.0	46.9

<sup>\*</sup> These dams are off-stream storages with relatively small catchment areas. Spillway overflows are likely to have little relative impact on downstream flooding.

Uncontrolled Copy Date: January 2010 43



# **8.3 Normal Operations**

# **Purpose**

This procedure is used to manage the operation of Seqwater's twenty uncontrolled spillway dams during a Flood Event.

# Scope

This procedure applies to the operation of Seqwater's twenty uncontrolled spillway dams during a Flood Event. It defines the responsibilities of Seqwater's Operations Coordinators, Dam Supervisors and Principal Hydrologist during flood events impacting on any of Seqwater's twenty uncontrolled spillway dams.

## **Responsibilities (Staffing of the Dam)**

During a Flood Event at an uncontrolled spillway dam, the relevant Operations Coordinator is to ensure that:

- Suitable staffing arrangements are in place to undertake any monitoring duties.
- All staff working during a Flood Event use the Event Log to sign on at the commencement and of the end of undertaking operations duties.

# **Responsibilities (Operation of the Dam)**

If called a dam to undertake duties during a flood, the Dam Supervisor is responsible for the following:

- Recording all Significant Events in the Event Log.
- Ensuring all notifications specified in the Flood Manuals and Emergency Action Plans are made.
- Conducting handovers that provide the following information to incoming officers:
  - o Reservoir storage elevations at each dam.
  - o Status of the communication systems.
  - o Any areas of concern associated with the management of the Flood Event.
- Advising the Operations Coordinator of any emerging issue that has the potential to adversely impact on dam safety during the Flood Event.



• Undertake water level monitoring in accordance with the following table:

DAM	SPILLWAY LEVEL (m AHD)	STORAGE LEVEL FOR DAILY MANUAL WATER LEVEL RECORDING (m AHD)	STORAGE LEVEL FOR TWICE DAILY MANUAL WATER LEVEL RECORDING (m AHD)	STORAGE LEVEL FOR SIX TIMES DAILY MANUAL WATER LEVEL RECORDING (m AHD)
Atkinson Dam	65.72	*	65.72	*
Baroon Pocket Dam	217.00	217.00	218.50	219.50
Bill Gunn Dam	110.00	*	110.00	*
Borumba Dam	135.01	135.01	138.00	139.00
Bromelton	80.00	*	80.00	*
Cedar Pocket	100.93	100.93	102.00	*
Clarendon Dam	96.00	*	96.00	*
Cooloolabin	295.91	295.91	296.30	296.50
Enoggera	74.37	74.37	78.00	80.00
Ewen Maddock	25.30	25.30	26.40	26.60
Gold Creek	92.75	92.75	96.60	97.40
Hinze Dam	82.20	82.20	88.40	90.00
Lake MacDonald	95.32	95.32	96.20	96.50
Lake Manchester	51.09	51.09	52.10	52.60
Little Nerang	168.02	168.02	170.00	*
Nindooinbah	122.80	*	122.80	*
Maroon Dam	207.14	207.14	208.90	209.30
Moogerah Dam	154.91	154.91	155.90	156.90
Poona Dam	152.70	152.70	152.90	*
Sideling Creek Dam	20.42	20.42	20.80	21.20
Wappa Dam	44.81	44.81	46.00	46.90

<sup>\*</sup> Water level recording at this frequency is not required

It is the responsibility of the Seqwater's Principal Hydrologist to ensure that the following actions are undertaken if a spillway overflow occurs:



• If the magnitude of the flood is having significant downstream impacts, make contact the Bureau of Meteorology and the Local Authority responsible for the area impacted by the dam outflow and offer assistance in the provision of dam outflow information. Contact details for these agencies are contained in the Seqwater's dam Emergency Action Plan. All such contact should be recorded in the Event Log. A guide for contact is contained in the table in Section 8.2.

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# 9 FLOOD EVENT COMMUNICATIONS WITHIN SEQWATER

# Purpose

This procedure is used to ensure that appropriate internal communications occur within Seqwater during declared Flood Events at Wivenhoe, Somerset, North Pine and Leslie Harrison dams.

#### Scope

This procedure applies to Flood Events at Wivenhoe, Somerset, North Pine and Leslie Harrison dams. It defines the responsibilities of the Seqwater's Dam and Source Operations Manager and Seqwater's Public Affairs and Media Manager.

# **Background**

Wivenhoe Dam and Somerset Dam both have significant flood storage capacities and during flood events have a significant impact on flood levels downstream of the dam. Flood releases from North Pine and Leslie Harrison dams have the potential to significantly impact on downstream populations. In a major flood event, Seqwater will have a significant role in providing information in relation to likely flood impacts downstream of the dams.

# Responsibilities

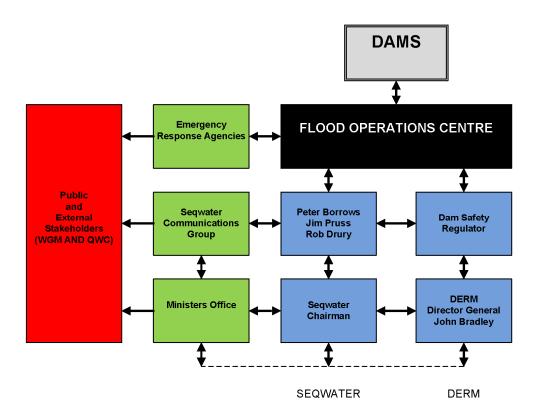
At the onset of a flood event the Flood Operations Centre notifies Seqwater's Dam and Source Operations Manager that a flood event has commenced and advises of the flood releases strategies adopted to manage the event and the expected magnitude and impacts of the event. The Flood Operations Centre also notifies Seqwater's Dam and Source Operations Manager of any changes to adopted flood release strategies throughout the event and provides regular updates in relation to the likely impacts of the event.

Seqwater's Dam and Source Operations Manager is responsible for relaying this advice to Seqwater's Public Affairs and Media Manager, Seqwater's General Manager Water Delivery and Seqwater's Chief Executive Officer. Based on the likely magnitude and impacts of the event, Seqwater's Public Affairs and Media Manager in consultation with Seqwater's General Manager Water Delivery and Chief Executive Officer is responsible for providing appropriate information to the following Seqwater personnel and external:



- Seqwater Executive General Managers.
- Seqwater Chairman.
- Water Grid Manager.
- Queensland Water Commission.
- Offices of the Premier and Seqwater's shareholding ministers.
- Public.

The following diagram outlines how these information flows are likely to occur during a flood event.



# **APPENDIX A**

# DAM STATUS SUMMARY SHEET

				F	CC BRISBANE		Pr	AGE 01/
						15	u. unMati	er
SUNWAT	FR					33	The state of the s	
Segwater Flood Contr	DAM O		IONS					
FACSIMILE								
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Rob Ayre		John Ku			V MINIOTIC		Theman	
Some	erset D	am. W	ivenho	e Dam &	North Pi	ine Dam C	<b>Operations</b>	5
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Copies to: Wivenho Somerse	e Dam et Dam			Iss	ued By:	John t	Ruffini	
Copies to:  Wivenho	e Dam et Dam ne Dam			lss		John H		
Copies to: Wivenho Somerse North Pir	e Dam et Dam ne Dam ry			Iss	sued By:	John +	Ruffini	
Copies to:  Wivenho Somerse North Pii Rob Drui Karalee 0	e Dam et Dam ne Dam ry Office	4	0504					
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Copies to: Wivenho Somerse North Pir Rob Drui Karalee (	e Dam et Dam ne Dam ry Office  Tent Sta	% Full Supply	Runoff to	ater Stor	ages - F	or your in	Read Rain at 10 mm/hr to Operate	<u> </u>
Copies to: Wivenho Somerse North Pir Rob Drur Karalee C	ce Dam et Dam ne Dam ry Office  Current Level (m AHD)	% Full Supply Storage 82	Runoff to Fill (mm)	Antecedent Precipitation Index	Expected Initial Loss (mm)	or your in  Reqd Rain at 5mm/hr to Operate	formation  Read Rain at 10 mm/hr to Operate	Inclusive Somerse catchmer
Copies to:  Wivenho Somerse North Pii Rob Drui Karalee (  Curr  Dam  Somerset (FSL 99.0 m) Wivenhoe	e Dam et Dam ne Dam ry Office  rent Sta  Current Level (m AHD)  97. 28	% Full Supply Storage 82	Runoff to Fill (mm)	Antecedent Precipitation Index  42.	Expected Initial Loss (mm)	or your in  Regd Rain at 5mm/hr to Operate / 2 8	Read Rain at 10 mm/hr to Operate	Inclusive

File swfxdamstatus.doc

Approved:

This facsimile is intended only for the addressee and may contain legally privileged and confidential information. If you are not the addressee, you are notified that any transmission, distribution, or photocopy of this facsimile is strictly prohibited. The legal privilege and confidentially attached to this facsimile is not waived, lost or destroyed by reason of a mistaken delivery to you. If you have received this facsimile in error, please invenediately notify me by delephone and return the original facsimile to me at my address.

Current Duty Engineer

John Tibaldi

Dam Operators - Please advise/confirm current levels and gate status.

# **APPENDIX B**

# SAMPLE FLOOD EVENT LOG

# **Flood Event Log**

Incident Name:



The purpose of the Incident Log is to record all decisions, actions, direction and other pertinent information. It is important for all personnel involved in managing / responding to the incident to record information in the event that it is required as part of a post incident review or some other investigation.

Incident Manager

moraciit	ivanic		mordent manager			
Date	Time	Item		Recorded by		

The controlled version of this document is registered. All other versions are uncontrolled.

Document Number: FRM-00136 Version Date: 27/05/2009 Page: 1 of 1 Document Owner: Peter Rawlings

Document Approver: Peter White

# APPENDIX C

# SAMPLE FLOOD OPERATIONS DIRECTIVE

# SUNWATER Segwater DAM OPERATIONS GROUP Flood Control Centre FAC SIMILE MESSAGE Senior Flood Openhons Senior Flood Openhons Duty Flood Openhons Engineer Duty Flood Openhons Engineer John Rob Ayre Senior Flood Openhons Engineer Duty Flood Openhons Engineer John Rob Ayre Flood Event Operations Directive TO: North Pine Dam Operators Date: 20/05/2009 Time: 13:50 Directive No: 1 This transmission comprises of this page and other pages. Please prepare for the commencement of gate operations. Latest estimates indicate that we will reach FSL by about 15:00 this afternoon, Gate C should be opened 1 increment when the lake level reaches EL39.65 mAHD (The gate trigger level). Minimum gate opening interval is 15 minutes between successive gate movements. Gate sequence will be as follows: Gate C: Opening increment 1 – Lake Level 39.650 mAHD Gate E: Opening increment 1 – Lake Level 39.700 mAHD • Gate A: Opening increment 1 - Lake Level 39.715 mAHD Gate D: Opening increment 1 – Lake Level 39.730 mAHD · Gate B: Opening increment 1 - Lake Level 39.745 mAHD Further gate openings are expected this evening based on current forecasts. We anticipate that we may reach EL 40.086 mAHD by tomorrow morning. Please ensure you provide confirmation of attaining gate trigger level (EL 39.65 mAHD) and that you sound the siren. Please provide the FOC lake level and gate settings information at least on an hourly frequency. Regards John Ruffini **Duty Flood Operations Engineer** C-I Documents and Settings I treatment Local Files | Content. Outlook 1741 SZINU OPS\_Directive 1\_20 05 09\_NorthPine. doc This faminds is interfed only for the addresses and may sentim legally privilegal and sentimental information. If you are not the addresses, you are notified that any transmission, distribution, or photocopy of this faminds is strainly problem. The legal privilega and confidentially standed to this faminds is not covered, but or distribution of a minimum distribution provided by the provided in a strainly problem. The legal privilega and confidentially standed to this faminds is not covered, but or distribution of a minimum distribution of the strainly in you. If you have reserved this faminds in severe glasse immediately notify one by highests and return the original faminds to me at my address.

# **APPENDIX D**

# WIVENHOE DAM - FLOOD READINESS CHECKLIST

Date: Time:	
Duty Officer in Charge:	
Rainfall (mm):	
Lake Level:	Gauge Board
Lake Level:	Auto dialler 07 54261483
Tail Level	Gauge Board
Tail Level	Recorder 07 54267664
,	ain gauge adjacent to office - Lake Gauge board on e board down Spillway Common road at Atkinson
Outlet Works	
Sump Pumps operational:	No. 1
High Level Alarm operations:	
V-Notch weirs clean:	
Dam Underground Complex	
Standby Generator operations:	П
Mode Selector switch to Automatic:	_
Monitor Telemetry:	
ivionitor reterrietry.	
Winch Room	
Electric Hydraulic Units operational:	
Diesel Hydraulic operational:	
Electric Hydraulic Unit Pumps mode	: Separated   Connected
Oil Return Valve Position:	Electric Vertical   Diesel Horizontal

Note: Check all valves are in position for mode selected. Key No. 5 is required for opening hydraulic cabinets as well as the Radial Gate local control panel on Pier.

# **APPENDIX E**

# SOMERSET DAM - FLOOD READINESS CHECKLIST

Date:	Time:					
Duty Officer in	Charge:		_			
Rainfall (mm):						
Lake Level So	merset:		_Gauge Board			
Lake Level Somerset:			Recorder			
Lake Level Wi	ake Level Wivenhoe:			ds	at bridge	
Lake Level Wi	ake Level Wivenhoe:			ord	er	
Communication	ons Phone: _					
Local Phones:	·					
Fax Lines:			Mobiles:			
Hand held Rad	dios:					
Satellite Phone	e:					
GENERATOR		el above office	(Top Deck)			
Check:						
Oil		Water			Fuel	
Battery		Auto Switch				

Test run by following the **Manual Operation Instruction Sheet** in the Generator Control Panel, run for at least 15 min.

<ol><li>Mobile Stand-</li></ol>	by Dies	el in shed at far end o	f Top D	eck			
Check: Oil		Water		Fuel			
Battery		Auto Start					
Test run by following	the <b>Ma</b> ı	nual Operation Instru	ction S	Sheet in the Generator	Control		
Panel, run for at least	t 15 min	1.					
3. Portable 5.5 F	Honda						
Check: Petrol		Oil		Test run			
Moved to Cone Valve	e Contro	ol Room					
banks. Test by turning	g auto/r	_	) to "ON	hambers on both left and an an an an an an an an an an an an an	_		
DOORS: all external	doors a	re to remain closed at	all time	2S.			
CHECK all lower galleries for any excessive leaks or irregular colour.  Follow the instructions in the Flood Manual for inspection intervals.							
Clean all drains that may become blocked.							
Cyclonic conc	litions s	ecure crane to tie dow	n points	S.			
Signed:							

# **APPENDIX F**

# NORTH PINE DAM – FLOOD READINESS CHECKLIST

# Checklist – Pre Flood

**NOTE:** Security Keypad located at Office – Isolate prior to entry on Dam Wall.

Date:	o/Man Switch) (est	Digital  Sw set to (4 see do	o Auto clay) (			43 sec
Autodialler ( )  Get Keys No.7 (Flood readiness) from level 2 key cabinet  LEVEL 7 ref Section 3 Stby Flood Operators Manual Sump Pumps Operational :- No1. No.2 Vee Notch We  LEVEL 4  Doors to external regulator valves closed No1. No.2 LEVEL 2 ref Section 5 Stby Flood Operators Manual  Check Oil Water Fuel Battery Charger Austandby Generator / Alternator Auto Operation (Turn off Main Leave selector set to Auto Reset Battery charger after the Radial Gate control supply energised All gate control selection with the switch located inside opening-Downstream side  Emergency Stop buttons pulled up  Brake lever AND Electric Motor operates freely Motor plug connection secure  Control Isolator "ON"	o/Man Switch) (est	Sw set to (4 sec do	o Auto elay) (	Turn On M		43 sec
Get Keys No.7 (Flood readiness) from level 2 key cabinet  LEVEL 7 ref Section 3 Stby Flood Operators Manual Sump Pumps Operational :- No1. No.2 Vee Notch We  LEVEL 4  Doors to external regulator valves closed No1. No.2  LEVEL 2 ref Section 5 Stby Flood Operators Manual  Check Oil Water Fuel Battery Charger Au  Standby Generator / Alternator Auto Operation (Turn off Main Leave selector set to Auto Reset Battery charger after the Radial Gate control supply energised All gate control selections with the located inside opening-Downstream side  Emergency Stop buttons pulled up  Brake lever AND Electric Motor operates freely  Motor plug connection secure  Control Isolator "ON"	o/Man S witch) ( est	Sw set to (4 sec do DCAL	elay) (	Turn On M	ain Switch )(	43 sec
Sump Pumps Operational: No1. No.2 Vee Notch We  LEVEL 4  Doors to external regulator valves closed No1. No.2  LEVEL 2 ref Section 5 Stby Flood Operators Manual  Check Oil Water Fuel Battery Charger Au  Standby Generator / Alternator Auto Operation (Turn off Main Leave selector set to Auto Reset Battery charger after to Radial Gate control supply energised All gate control selection and the switch located inside opening-Downstream side  Emergency Stop buttons pulled up  Brake lever AND Electric Motor operates freely  Motor plug connection secure  Control Isolator "ON"	o/Man S witch) ( est	Sw set to (4 sec do DCAL	elay) (	Turn On M	ain Switch )(	43 sec
Doors to external regulator valves closed No1. No.2  LEVEL 2 ref Section 5 Stby Flood Operators Manual  Check Oil Water Fuel Battery Charger Austandby Generator / Alternator Auto Operation (Turn off Main Leave selector set to Auto Reset Battery charger after to Radial Gate control supply energised All gate control selection and all circuit breakers turned on in SWITCHBOARD A (behind Manual Light switch located inside opening-Downstream side Emergency Stop buttons pulled up Brake lever AND Electric Motor operates freely Motor plug connection secure Control Isolator "ON"	witch) ( est   ctors LC  ain Swi	(4 sec de	elay) (	Turn On M	ain Switch )(	43 sec
Check Oil  Water Fuel Battery Charger Austandby Generator / Alternator Auto Operation (Turn off Main's Leave selector set to Auto Reset Battery charger after to Radial Gate control supply energised All gate control selections and all circuit breakers turned on in SWITCHBOARD A (behind Main's Local Control Selection 2a Stby Flood Operators Manual Light switch located inside opening-Downstream side Emergency Stop buttons pulled up Brake lever AND Electric Motor operates freely Motor plug connection secure Control Isolator "ON"	witch) ( est   ctors LC  ain Swi	(4 sec de	elay) (	Turn On M	ain Switch )(	43 se
Standby Generator / Alternator Auto Operation (Turn off Main Leave selector set to Auto Reset Battery charger after to Radial Gate control supply energised All gate control selection and the Reset Battery charger after to Radial Gate control supply energised All gate control selection and the Radial ate control selection and the Radia Gate control selection and the Radia	witch) ( est   ctors LC  ain Swi	(4 sec de	elay) (	Turn On M	ain Switch )(	43 se
All circuit breakers turned on in SWITCHBOARD A ( behind M  LOCAL CONTROLS ref Section 2a Stby Flood Operators Manual Light switch located inside opening-Downstream side Emergency Stop buttons pulled up Brake lever AND Electric Motor operates freely Motor plug connection secure Control Isolator "ON"	ain Swi	itch)	Ì	E		
LOCAL CONTROLS ref Section 2a Stby Flood Operators Manual Light switch located inside opening-Downstream side  Emergency Stop buttons pulled up Brake lever AND Electric Motor operates freely Motor plug connection secure Control Isolator "ON"			2.0	E		
Light switch located inside opening-Downstream side  Emergency Stop buttons pulled up  Brake lever AND Electric Motor operates freely  Motor plug connection secure  Control Isolator "ON"	В	C	D	E		
Emergency Stop buttons pulled up Brake lever AND Electric Motor operates freely Motor plug connection secure Control Isolator "ON"	В	С	D	E		
Motor plug connection secure Control Isolator "ON"						
Control Isolator "ON"						
EXTERNAL CONTROL PANEL ref Section 2h SthvFlood Operators						
EXTERNAL CONTROL PANEL ref Section 2h SthvFlood Operators						
A	Aanual <b>B</b>	С	D	E		
Direction switch OFF  Very release ISOLATOR, Assolible light or						
Key release ISOLATOR Available light on Push ISOLATOR and re-lock control panel						
DECK ref Section 6 StbyFlood Operators Manual						
A	В	С	D	E		
Cathodic Protection OFF ( Nth winch Gate A) Anode strings pulled up						

Note! Use of portable trailer dependent on possible severity of flood event.

# **APPENDIX G**

Selector Switch **AUTO** 

# LESLIE HARRISON DAM - FLOOD READINESS CHECKLIST

NOTE: Security keypad located at spillway control building. Time: \_\_\_\_\_ Duty Officer in Charge: \_\_\_\_ Date: \_\_\_\_\_ Lake Level Float: \_\_\_\_\_ Digital: \_\_\_\_ Intake Tower Gauge Board:\_\_\_\_ **Main Switch Board** All circuit breakers ON? ☐Yes ☐No **Control Panel 1** Emergency Stop **UP** □ Selector Switch AUTO No Faults **Control Panel 2** Selector Switch AUTO □ Emergency Stop **UP** □ No Faults □ **Control Panel 3** Selector Switch **AUTO** Emergency Stop **UP** □ No Faults □ **Control Panel 4** 

Emergency Stop **UP** □

No Faults □

Standby Generator		
Test Operation	Fuel	Batteries
Charger 🗖	Change Over Switch ☐	
Hoist Gates Bridge Control Pa	nnel 1	
Isolator <b>ON</b> □	Air Valve <b>OFF</b> 🗖	
Hoist Gates Bridge Control Pa	nnel 2	
Isolator <b>ON</b> □	Air Valve <b>OFF</b>	
Hoist Gates Bridge Control Pa	nnel 3	
Isolator <b>ON</b> □	Air Valve <b>OFF</b> 🗆	
Hoist Gates Bridge Control Pa	nnel 4	
Isolator <b>ON</b> □	Air Valve <b>OFF</b> 🗆	
Air Compressor		
Test Operation □	Fuel  B	atteries 🗆
Bleed System of Water Panel	Northern Pipe	e End 🗖